



PROTOTYPE: 10-11 June, **2010**

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**@ the Dalhousie
Symposium co-convened by the Victoria & Albert Museum
and Duncan of Jordanstone College of Art & Design**

<http://www.dundee.ac.uk/djcad/prototyping/>

Prototype – craft in the future tense

Delegate Pack
10-11 June 2010

Duncan of Jordanstone College of Art and Design
University of Dundee
Scotland 2010

Symposium Organisers

Louise Valentine

Glenn Adamson

Fraser Bruce

Sean Kingsley

Catherine Brown

Fanke Peng

Symposium Sponsors



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The Past, Present and Future Crafts research team, Duncan of Jordanstone College of Art & Design and the Victoria & Albert Museum London welcome you to this symposium. The rationale for the symposium was to establish whether prototyping can act as a means of communication and knowledge exchange between individuals and teams from across disciplines. It can! The evidence provided by our speakers' presentations and our industry experts' active participation demonstrates the potential of prototyping for deep and meaningful engagement across, and despite, boundaries.

We are seeking to understand the quality of developments in craft through the use of prototyping. This event will explore a mobile concept central to all disciplines: a theory and practice about progressiveness and the ability to imagine and re-imagine the future. We will show that practitioners are disentangling issues of profound importance politically, socially and digitally, communicating to a wide audience the value and vitality of craft intelligence.

The next two days is about revelling, both intellectually and socially, in all the forms and implications that prototyping involves. Dundee, the City of Discovery has opened its heart to the conference through its hospitality: the Private View of the crafts exhibition and Crafts book launch in the Dalhousie Building, the Private View of Chicks on Speed, and the screening of Handmade Nation, both in Dundee Contemporary Arts, to name but a few. The symposium plays an important part in Crafts Festival Scotland, a nationwide series of events during the summer of 2010 aimed at increasing awareness of the sheer diversity that Craft encompasses. We hope you will take advantage of your stay here in Dundee to explore the various offerings that Dundee has to offer.

We look forward to the debate that our speakers are sure to excite.

Enjoy!

Tracy Mackenna
Acting Dean
Duncan of Jordanstone College of Art and Design

Special Events Wednesday June 9th

5.30 pm **Book Launch & Private View**
Innovation & Creative Development in Craft
 Dalhousie Building, University of Dundee

8.00 pm **Faythe Levine**
Handmade Nation
 Dundee Contemporary Arts

Day One Thursday June 10th

9:00-9:30 **Registration &**
Tea / Coffee

9:30 **Welcome and Introduction**
 Dr Louise Valentine
 Past, Present and Future Craft Practice project

9:45 Constance Adams, Synthesis International
 Techne and Logos at the Edge of Space

10:15 Leonardo Bonnani, MIT Media Lab
 The Tools and Tool-Makers of the Bazaar: New Paradigms
 in Computer-Aided Craft

10:45 **Tea / Coffee break**

11:15 Hazel White, University of Dundee
 Crafting the Idea

11:45 Discussion
 Chaired by Dee Cooper, Product and Service Director,
 Virgin Atlantic Airways

12:30-2:00 **Lunch**

2:00 Michael Schrage, MIT
 Title tbc

2:30 Catharine Rossi, Royal College of Art/V&A Museum
 From Mari to Memphis: The Role of Prototypes in Italian
 Radical and Postmodern Design

3:00 Dr Elizabeth Sanders, Maketools
 Prototyping for the Design Spaces of the Future

3:30 **Tea / Coffee break**

4:00 Alex Murray-Lesley and Melissa Logan
 Chicks on Speed

4:30 **Discussion**
 Chaired by Chris van der Kuyl, CEO, Brightsolid Ltd

5:15 **Close**

Special Events Thursday June 10th

6.00 pm **Drinks and Canapes**
 Dundee Contemporary Arts (DCA)

7.00 -- 8.30 pm **Chicks on Speed: Don't Art, Fashion, Music**
Film screening
 Dundee Contemporary Arts

Day Two Friday June 11th

9.00-9:15	Tea / Coffee	1:45	Professor Pieter Jan Stappers, ID-StudioLab, University of Delft Prototypes as Central Vein for Knowledge Development
9:15	Welcome and Re-Introduction Dr Glenn Adamson Deputy Head of Research and Head of Graduate Studies, Victoria & Albert Museum London Corporate Craft: The Artisans of Detroit	2:15	Dr Rosan Chow, Deutsche Telekom Laboratories The Method Rip&Mix & Reflection on its Prototypes
	“American Look” – (part II) (1958) The definitive Populuxe film on 1950s automotive, industrial, interior and architectural design Producer: Handy (Jam) Organization, 8min58sec	2:45	Professor Norman Klein, School of Critical Studies, Cali fornia Institute of the Arts Embedded Media and the “Futures” of Material Culture: Synopsis for a future essay, an emerging history of parallel worlds
9:30	Dr Frederic Schwartz, History of Art and Architecture, University College London Prototopia: Craft, Type and Utopia in Historical Perspective	3:15	Tea / Coffee break
		3:45	Discussion Chaired by Colin Burns, Honorary Professor University of Dundee
10.00	Simon Starling, Conceptual Artist Five Thousand Years (Some Notes, Some Works)	4:30	Closing Address Dr Sarah Teasley, RCA
10:30	Tea / Coffee break	5:00	Close of Day 2 and End of Symposium
11.00	Dr Stuart Brown, Institute for Medical Science and Technology, University of Dundee Prototyping for High Value, Time Poor Users		
11.30	Discussion Chaired by Dr Steve Gill, PAIPR, University of Wales Institute Cardiff		
12:15-1:45	Lunch		

A participants' list, with names and institutions, is available upon request. Please see p36 of this booklet for contact information, and to request an electronic copy.



Constance Adams

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Space Architecture. A pioneering individual pushing the boundaries of architecture in order to create habitable environments for space travel.

Techne and Logos at the Edge of Space

Currently, humanity is advancing at a rate beyond our experience. Half a century ago, we had just developed the jet aircraft engine and learned that there was no barrier preventing us from exceeding the speed of sound. This took place in a polarised world. Any developed-world kid with access to information and common resources, could build a telephone or learn to fix the family car. Most developing-world kids could make a fire and build a common tool and might expect to learn more skills as Western culture spread.

Today, fifteen nations are sharing the use of a jointly-built permanent platform in space, collaborating despite great cultural and political differences, although not all of the member nations are formally at peace. Images of our planet from afar have radically changed the tribal sense of loyalties and territory that helped man to survive. Replacing the tribe-nation is a much larger identity structure that places the individual's knowledge-group within a planetary context, erasing ancient boundaries between peoples, nations and ideologies. Awareness of systemic patterns of weather around the globe has begun to bring us solutions to local problems, even as the same global view has shown us the danger of climate change and the role played by local interventions.

Nevertheless, a gap is growing between those equipped with the basic skills of life and those without. This gap is an inversion of the normal expectations which illustrate the imbalance between developed and developing countries. Those from the developed world are healthy, secure and profligate and possibly threatening the balance of the biosphere. They lack, however, the practical knowledge, which is endemic in the developing world.

What we are confronting, among the most powerful on our planet, is a critical dissonance between techne—tools, or skill—and logos—knowledge, understanding. On the one hand, they value learning and applied science, in order to combat climate change and fulfill what may be the biologically programmed destiny of our species. On the other, they are running the risk of losing the knowledge of balance, form and purpose that is learned by working with one's hands.

In this paper, I intend to reconsider the human relationship with tools and form-making in terms of homo sapiens astronauticus. From our perspective at the edge of space, humanity has played a strikingly unique role in Earth's biological history and craft lies at the heart of this. While the way forward seems clear for the technologies of rapid-prototyping and manufacture on which space architects and mission planners expect to rely, this may not be wholly positive. What capabilities are required to prosper in the foreseeable future? Have we evolved sufficiently to move beyond the relationship between body and thought that has characterised the making of things since the beginning of time? How shall we make the things we need to progress? I believe that the answer will be multidimensional, technical and physical.



Leonardo Bonanni

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Design Sustainability. A pioneering individual exploring the impact of design and technology in order to move towards radical social and environmental sustainability.

The Tools and Tool-Makers of the Bazaar: New Paradigms in Computer-Aided Craft

There is a new form of Craft emerging through the one-of-a-kind objects made through rapid prototyping techniques outside the industrial domain: in the open-source bazaar of tinkerers, hackers and makers who are re-fashioning the design and production tools themselves. The spirit of Craft is apparent in the novel artifacts, prototyping tools and tool-making kits shared by this guild-like community. Product design interfaces are also being pushed beyond the keyboard-and-mouse paradigm toward virtuosic interfaces responsive to a wider range of bodily expression. At the root of these innovations lies the recursive nature of digital tools, which can be used to create new versions of themselves, multiplied by the sharing of source code encouraged in digital communities. The roles of consumer, creator, and tool-maker are beginning to blur into a rich plurality with potentially sweeping economic and social consequences.

Craft – the skilled practice of making – stands apart from mass production in its scale and has traditionally been more specialized, able to reflect individual and cultural values. As traditional Crafts declined, the rise of mechanized manufacture has shifted the definition of quality toward efficient, reliable commodities designed for a homogenized consumer. Even recent efforts at 'mass customization' provide only a handful of pre-defined choices for individuals to express themselves. Whereas the objects of our lives are almost all standardized, digital media has the potential for infinite forms of expression in ways that are increasingly able to be reflected in the material world. Computer-aided design and manufacturing techniques –originally intended to streamline the development of mass-produced objects– have become valid tools of production themselves, expanding the potential variability of design. These tools have become simple enough that they can be built by tinkerers with access to the documentation and supply channels of web marketplaces. Individual products and the machines that make them can be custom-made. The corresponding shift in values could expand the concept of individual expression afforded by everyday artifacts toward specialized practices unique to individuals and cultures, also known as Craft.

As computer-controlled fabrication diffuses skilled, one-of-a-kind manufacture, the mundane and generic interfaces that are ubiquitously associated with digital work have the potential to grow more expressive and individualized. For decades Tangible Interfaces have loomed on the horizon, only to become reality with the introduction of motion- and touch-based controls in a variety of devices. Unlike a keyboard and mouse, these interfaces respond to a wide range of human motion, potentially reflecting the unique skills of different bodies in the execution of digital tasks. Similar to craft instruments, gesture-based interfaces can take months or years to perfect. These virtuosic interfaces applied to digital design and manufacture could spur computer-made objects that express and embody the Craft of individual makers.



Hazel White

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Digital objects for technologically untroubled. A practitioner exploring how crafted objects could provide useful interfaces for technology.

Crafting the Idea

Anthony Dunne suggests that the craft object and the thinking embodied within it should not be considered prototypes. He refers to these objects as 'genotypes' – models which contain the 'gene' of the idea. The value of the object is in its content, or 'genes' rather than appearance and technical function. The genotype is not part of a process where the object goes through several iterations, between designers and engineers to identify appropriate technology and engineering requirements prior to manufacturing, but are embodiments of an idea themselves. This allows an interesting space for the craftsperson to exist: suggesting new functions for craft objects, which are not simply ways of 'dressing technology' such as jewel encrusted USB storage devices or novel ways of wearing iPods to the gym, but a way of exploring the multilayered meaning of personal objects. The idea of the genotype gives a certain amount of freedom to the craftsperson: instead of becoming bogged down in technology which will inevitably become cheaper, faster and smaller, the aesthetics and meaning of the interactions can be explored using low tech software and hardware. Hazel White collaborates with multimedia artists, computers programmers, software developers, craft makers and designers to explore how engagement with crafted objects, from jewellery to knitting can be translated into suggestions for personal interactive artefacts. Ideas for simple interactions are created by a hybrid craft and design process: material and technical process explorations, mock ups, test pieces, prototypes and genotypes are created which allow interaction with a physically embodied idea.

This paper explores the notion of crafting the idea through the development of a number of projects undertaken in 2008 and 2009 and partly funded as part of the Arts and Humanities funded Past, Present, Future Craft Research Project at the University of Dundee. Design and craft, users and makers, software and hardware collide to create a range of artefacts from jewellery which has its own secret animated life to knitted remote controls.

The method of working and outputs were influenced by other projects in which the author was involved in concurrently including RIP+MIX, a research project for T-Labs, Deutsche Telekom, a period as Artist in Residence in Shetland and her role as Director of the Master of Design Programme at the University of Dundee.

The paper explores the tensions, contradictions and synthesis between craft, design, art and technology suggests further opportunities for developing this method of working.



Michael Schrage

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Business Theorist. A leading advisor in cultivating organisational environments through the use of prototypes and simulations.



Catharine Rossi

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Historian / Radical and Post-modern Design. A PhD student

From Mari to Memphis: The Role of Prototypes in Italian Radical and Postmodern Design

In September 1981 Memphis unveiled its first collection at the annual Milan furniture fair. The decorated plastic laminate surfaces and bright clashing colours were not only an iconoclastic attack on Italian design's reputation for good taste but also introduced an identifiable postmodernist aesthetic to be much-imitated throughout the 1980s. However, the condition of these well-known objects as one-off, hand-crafted prototypes has been totally overlooked, and yet was key, speaking of their provisionality and marginality, and a continuing reliance on Italy's wealth of artisanal workshops as an alternative to mainstream industry.

Memphis was not the first time prototypes had played a leading role in the critical turn in post-war Italian design. The self-declared Marxist Enzo Mari had used prototypes in his early 1970s criticism of the alienating nature of mass production and consumption; curating the 1981 *Where is the Artisan?* exhibition, Mari included prototypes as one of the primary manifestations of craft in Italy's post-industrial landscape. While prototypes in multiple materials were included in the Exhibition, all the examples discussed here are low-tech wooden objects that explored the expressive, rather than technical qualities of objects, as in Michele de Lucchi's prototypes for domestic appliance manufacturer Girmi from 1980. Unlike Memphis, de Lucchi's prototypes never went into production, seen as too experimental for the design marketplace. By examining the multiple engagement with prototypes in 1970s and 1980s, this paper aims to re-consider Italian design practice in this period, and offers an opportunity to analyse the marginalized role of craft practice in Italy's post-war design history.



Elizabeth Sanders

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Co-Design. A leading expert in the use of prototyping methods for co-creation or user collaboration.

Prototyping for the Design Spaces of the Future

This paper will describe some emerging prototyping activities to help us not only give shape to the future, but also, make sense of it.

The shift in the focus of design from the old traditional design disciplines (e.g., architecture, interaction design) to the new emerging design spaces (design for experience, service, innovation, transformation and sustainability) that shows how the design domains are in the midst of a radical transformation. Design has been primarily concerned with the making of "stuff". The traditional fields of design education are characterised by that which designers learn to make (e.g., architects make buildings). Prototypes made during the traditional design process represent possible future products, spaces or buildings. The languages that designers learn in school are specialised to create form (e.g., sketches, prototypes, and models).

Design practice is moving from a preoccupation with the making of stuff to a consideration of making stuff for people in the context of their lives. In the new design domains, there are three major manifestations of change. 1. the alternative embodiments both for describing and enacting experience such as stories and timelines of experience. 2. the rise of creative activity, sought by everyday people. 3. the recent interest and enthusiasm in what is called "design thinking" which is particularly popular in the business community.

Concomitant with the rise in creativity that we see from everyday people and the interest from the business community in design thinking, is the recent obsession with co-creation (Sanders and Simon, 2009). This change brings with it the need for new forms and means of supporting and inspiring collective creativity. As the landscape of design has been changing, new types of prototyping are emerging, including Experience prototypes (Suri, and Buchenau, 2000) and Empathy probes (Mattelmaki and Battarbee, 2002).

In the traditional design domains, prototypes are used primarily for giving shape to the future. Here, prototypes serve as representations of the products, spaces and buildings that might exist in the future. They are focused on the object of design. In the new design spaces, prototypes are not seen as representations of future objects but as tools for exploring the future. Signs of this mindset are beginning to appear. For example Westerlund (2009) claims that you make a prototype in order to learn about future situations of use and suggests that we focus on what prototypes afford (vs what prototypes represent).

Future prototyping will unfold as an iterative loop of making, telling and enacting in the future design domains. We can also expect to see more in the way of experiments and interventions as means of prototyping. As the problems designers deal with become more complex, it has become apparent that a new design language that everyone can use is needed. The embodiment of an idea needs to be communicated to and understood by others or it will not be made or enacted upon in the future. The making, telling and enacting loop is a positive step forward in that direction.



Chicks on Speed

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Melissa Logan m@chicksonspeed.com

Musicians, Artists and Innovators

Chicks on Speed blur the boundaries between art, future-craft, avant-pop-music, fashion, politics and consumerism. Core Members Melissa Logan and Alex Murray-Leslie, first came together in Munich in 1997, after meeting @ The Academy of Fine Arts, where Melissa studied Painting and Alex contemporary Jewellery. Murray-Leslie and Logan have always classified C.O.S. as an Art "project" rather than a band. Their mission lies in the advancement of cutting-edge culture, using the tools of art, fashion, new media and music, to create one giant Chicks on Speed GESAMTKUNSTWERK, a term that characterizes their live & Art-performances.



Frederic Schwartz

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Design / Architecture. A leading architectural historian.

Prototopia:

Craft, Type and Utopia in Historical Perspective

One hundred years ago, at the time of the consolidation of a discourse on design, thinking about craft and prototypes for serial production took place in the context of important institutions (the Deutscher Werkbund, the Swedish Hemslöjdförening, and others) and a broad cultural press, and it involved economists and philosophers of the rank of Max Weber, Georg Simmel, Ernst Bloch and Georg Lukacs. This should be no surprise, as the issues were those of modernity itself, specifically the nature of a culture which took place increasingly across the space of a mass market for consumer goods. We can identify two characteristics of these early discussions. First, 'craft' and 'prototype' were seen as irreconcilable opposites. Second, the issues were debated around different notions of modernity as utopia—in other words, they were conceived in the future tense.

The utopia of craft as a critique of modernity has a long history since the work of Ruskin and Morris, but it is in the work of Ernst Bloch, specifically his *Spirit of Utopia* (1918) where the philosophical stakes of craft were perhaps analysed in the greatest depth. Like his predecessors in the Arts and Crafts movement, Bloch opposes craft and machine production, describing them in terms of a binary distinction between warm and cold. In terms of production, craft engages the entire human: it is creative, productive and reflects in material the highest intellectual and spiritual potential of the subject. This is, of course, an old story; but it is in his analysis of the reception of the object that Bloch goes further. Drawing on the work of economists of the time, Bloch describes the subjective side of the use of craft objects, seeing in them the basis a communal life of shared values and aspirations, of the expression of 'style' as the visual expression of a unified community, of the utopia of a social life not fragmented by a multiplicity of visual forms produced by laissez-faire capitalism.

But the distinction between craft and machine was a static one in the face of the processes of modernisation. The theoretical task was to dissociate the opposition of craft versus machine from that of warm versus cold. The concept that seemed to allow the negotiation of these conflicting aims was that of the 'type'. The type was seen as a way of reconciling the history of a kind of object (chair, pitcher, whatever) with the need to design a model for mass production, a way of combining a notion of culturally achieved perfection with that of the demands of modernity. Le Corbusier's idea of 'mechanical selection' is the clearest statement of this possibility, but other interventions were more subtle. In particular, theorists of the object saw the need to balance the demands of culture that were described by a new distinction that entered the debate: that between type as embodying anonymity or transcendence versus the type as allowing the assertion of identity and difference.



Simon Starling

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Conceptual Artist. A leading artist who intelligently explores the concept of craft through materials and technology.

Five Thousand Years (Some Notes, Some Works)

Focusing on a number of key works from the last ten years and with recourse to the work of, among others, George Kubler, Chris Marker and Carlo Mollino, "Five Thousand Years (Some Notes, Some Works)" attempts to establish a predominantly temporal understanding of the artist's sculptural practice and consequently its particular relationship to craft. Just as in Starling's practice as a whole, the text orchestrates a playful collision of ideas and phenomena in the folds and wormholes of space-time.



Stuart Brown

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Biomedical Engineer. A leading expert in the use of prototyping methods for the design and development of new surgical instruments and manipulators for laparoscopic surgery.

Prototyping for High Value, Time Poor Users

The growth of computerisation in manufacturing industries since the 1980's has promoted significant improvements in production technology, the tools of design and prototype creation. Many previously complex product-creation processes have become greatly simplified, freeing the designer's intellect to add greater value and innovation to the final artefact. The result is the greater quality of mass-produced items. These are facets of a product which lend themselves to quantification and objective analysis through the physical sciences and the influence of computerisation in production is identifiable.

How can design, evaluation, refinement and the final definitive creative act, be pursued in an environment where interactions are unclear? Prototyping must surely play a leading role. This study explores the development of surgical instrumentation, to investigate what measures are necessary to prototype a finished device and simulate its final environment. A particular difficulty is that the end user – the surgeon - cannot significantly contribute to collaboration with the designer in the creative process but nevertheless demands the instrument's performance be uncompromised.

The conjunction of two issues is addressed: prototyping in an unclear environment and for an illusive user. In some industries, tension between high performance expectations and impoverished collaborative opportunities with the end user is addressed by employing surrogates of that user group, test pilots being an example. Such 'test flying' opportunities rarely exist in medicine, where the environment of the product can infrequently be simulated and the stringent ethical constraints inhibit the human testing of prototypes.

Moreover, such culturally valued, 'time poor' users enjoy a different relationship to creative and manufacturing industries, than consumers of mass-produced goods. The former is more akin to that of a commissioning patron and such users have every expectation that their professional insights will influence the product's evolution.

Valued users are often self confident to express an opinion. In this context that the first form of prototyping can be pursued: the "thought experiment". A method of evaluating the hypothesis and the critical judgement of results. Thus, the envisaged product can be evaluated through discussion of its potential form, function and its likely environmental impact. Craftsman undertake the same mental projection and their imagined response to a product is often their inspiration. In the 'valued user' context, the thought experiment may be more productive, especially because it provides the collaborators with speed and capitalises on those skills described above. There are two forms of abstracted 'prototyping', by which users may pursue the design of a product: retrospection – the evaluation of the envisaged design in the context of prior experience and cross-fertilisation - introducing some form or function from elsewhere.

Abstract 'prototyping', even with an educated user group, is clearly of limited value and development of the product concept cannot proceed without the use of CAD, surface modelling or other techniques, to produce a model and some representation of its potential environment. For the valued user, this must be of exceptional quality but once their attention has been engendered, the next prototyping iteration, in pursuit of the best possible product, can begin...



Pieter Jan Stappers

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Product Design. A leading expert in the design and development of new tools and techniques for industrial design practice.

Prototypes as central vein for knowledge development

This paper describes the way in which design thinking, especially the making of prototypes, can guide research projects progress, making optimal use of design skills.

Recently, design has matured as an academic discipline with a growing interest between design(ers) and research, as complementary activities. Within design education, there is tension between research and design. The great breakthroughs in science were often made by people with a practical application, plus the value of scientific methods in understanding and testing has become accepted in design curricula.

The rise of design as a university subject came the emergence of a research field, which was once filled by people with research skills from other domains. In the last decade, we've seen a rise in the number of design PhD researchers who can deploy design skills within a research project.

The knowledge-intensive nature of product development has brought acceptance that doing research is an increasingly important part of design. The realization of the reverse has been slower in being accepted. Academic traditions, such as reviewing policies of scientific journals are more geared towards reporting a validation and often regard generation as an arcane process. Both validation and generation are equally important in our research, and it is the latter at which designers can excel. Thus, engineering research often combines better understanding, with better solutions.

Over the past decade, our group has focused on developing design techniques for the early, creative phases of design projects, each time picking out a key question, e.g., 'how do designers use existing products as inspiration?'. The project couples a question of understanding the process with a drive to improve current practice. It involves input from relevant scientific areas, e.g., ethnography, interaction design and uses its insights in the creation of a tool through a sequence of prototypes.

The main difference from regular design projects is that this process is research. The challenge is to prevent this knowledge from evaporating and to offer it to the scientific communities. The knowledge is the validation of the prototype and the hypotheses and how these link the different knowledge acquired throughout the process. Making the prototype necessarily confronts earlier pieces of knowledge and confronts them first with each other and then with the world.

Over the years this format of researching how designers work by developing prototypes of tools in reciprocal interaction with bringing in areas of theory has been explored in various projects. Trying to achieve working tools forced the research team to face up to questions such as "what do designers need", "how does theory fit practice". Each question helped to bring out 'the language of everyday experience', to create a common ground which prevented from discussions to float away in speculation. Prototypes connect knowledge to the world of experience.



Rosan Chow

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Design Theorist. An internationally renowned design researcher exploring and experimenting with new design methodologies.

The method Rip & Mix & Reflections on its Prototypes

I have been arguing for and developing, a design approach Case Transfer and a design method, 'Rip & Mix' since 2007. Although I have worked diligently, I have rather intuitively claimed that my research process resembles prototyping. My presentation will be divided into two parts.

Firstly, I will address the assumptions, the theories and research results of Case Transfer and Rip & Mix, as well as attempting to identify some implications for craft research and practice.

Case Transfer is based on two assumptions. Firstly, projecting new artefacts is independent of analysing and understanding design context, including user needs and wants. Secondly, existing artefacts are knowledge sources for projection of the new. Knowledge can be taken from one artefact and placed in another domain or context, to create something new, which I identify as 'Case Transfer'. There are three different types of transfer, namely, Local, Regional and Long-Distance. Case Transfer is possible only if artefacts embody knowledge that can be retrieved. Artefact and knowledge are concerned with how they relate, rather than whether they do. I will argue that artefacts embody intrinsic knowledge and context, which can be analysed and abduced because they act as signs. Using Pericean's abductive theory, semiotics and research results, I will describe the six ways and consequences of analysing, interpreting and transferring, knowledge embodied in artefacts. This framework can readily be transferred to craft research and practice.

Secondly, I will reflect on the process of developing the projective method Rip & Mix and relate it to the theme of prototype. This will be more concerned with issues, than reporting knowledge gained. I will describe what is retrospective, that is, a kind of post-rationalisation and a constructive account.

Prototypes are not final product but indicate some aspects of the final product. Conceptual prototypes are indispensable in design and craft. When I recall the process of developing the early version or prototype of Rip & Mix had only three steps whereas, now it has six. It will continue to be refined, however, the basic essence of it will remain.

This brings to mind the psychologist Eleanor Rosch, whose prototype theory broke new ground in the understanding of cognition. According to Rosch, when people categorise, they match with the prototype which has the most representative features of the category. Prototype is a basic level of categorisation (chair) and not a super ordinate (furniture) or a subordinate (kitchen chair). Thus, I would propose that conceptual prototypes in design or craft might function similarly to Rosch's prototypes. They are the medium through which or results by which, our abstract concepts are externalised and made perceivable. They contain essential information to allow testing of, communicating about and evaluating our concepts. I suggests that conceptual prototypes must be different from abstract thought in some significant way, as a chair as a basic level category is different from furniture as a super ordinate category.



Norman Klein

California Institute of the Arts
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An author, historian and cultural critic

Embedded Media and the “Futures” of Material Culture: Synopsis for a future essay, an emerging history of parallel worlds

The term “embedded” is ephemeral but its historical significance goes back many centuries and clearly will invert many of our assumptions about cities, public space, the body. It is like the 2010 model of an every day appliance and can enwrap a building. In many cities, billboards, as well as the facades of buildings, are sheathed in giant computer screens. These can be video or slide shows or even interactive to the viewer. They convert a street into a computer desktop.

At the same time, wearable technology, including portable phones and ipods, can embed “social media” into one’s clothing. Thus, embedded technology is very often “intuitive,” by definition. Of course, the most spectacular form of embedding is the most nano - from cloning to “elastic minds”. Thus, embedded media transverses from gigantism to the microscopic-- from a highrise shrouded in screens, to micro-bots inserted in people’s bodies.

Locative media are clearly embedding in the dashboards of cars, like Saint Christopher medals and on iphones. We must appreciate how these devices can alter one’s sense of place, of travel. As regards this GPS example, to begin a transition, into historical examples of “embedding”. In the mid-nineteenth century, the first aerial photographs were taken from balloons. Similarly, we turn to communication devices like telephones: here, we settle on the term “telephonoscope” in 1877, to understand the subject of embedded media as an historical construction. The telephonoscope was supposed to be a visual telephone that combined sound and imaginary streaming video. Joseph Dumaurier delivered a number of fantasies about an invasive two-way visual telephone in 1877.

The way that print and architecture were embedded into each other in the late nineteenth century, in painted tiles, in photo and wood engraved vignettes. In 2010, with e books, the book itself has become a test case for embedding back and forth. Many artists and designers are attempting to embed the tactile engineering of the book into the seamless plasticity of the computer screen. The book and print had an intuitive presence that seems to be re-merging in miniaturized computer gadgetry.

In summary, one mark of embedding is that it recreates the intuitive media experience, by cross-wiring one medium into another. I will complete the synopsis with suggestions on how this history can be written—and named—from the middle of the nineteenth century to the middle of the twenty-first century. We need a discipline to resolve the flood of information involved. Embedding is very much a history of material culture, of the theater of the streets, of public and private life—vast, but workable, and certainly filled with “telling” evidence.



Dee Cooper

Virgin Atlantic Airways Ltd
nicki.watkins@fly.virgin.com

Director of Product and Service for Virgin Atlantic and is responsible for creating the customers brand and travel experience.

Dee Cooper is Director of Product and Service for Virgin Atlantic. This important focus on product and service reflects the continued desire to ensure the best customer experience in the industry. For years Dee has been the name behind the airlines innovative successes, of the Upper Class Wing, overseas Clubhouses and most famously Virgin Atlantic’s £105M Upper Class Cabin, unveiled in late 2003 and rolled out across the airline’s fleet of aircraft.

In her role as Director of Product and Service, Dee is responsible for creating the customers brand and travel experience from it’s lounges to it’s seats, graphics, onboard entertainment, food and cabin crew service. She has been with the company for fourteen years, joining in 1995, as it’s only product designer, with a degree in Industrial Design from Brunel University. Early success included the first Drive Thru Checkin at London Heathrow’s airport that allowed customers to check in from the comfort of their complementary limousine. The design team grew, winning awards for San Francisco Clubhouse, Economy Meal Service and both the Upper Class interior and seat

Dee’s next step was to move sideways and set up the Product Team. Bringing commercial analysis and competitive appraisal of Virgin Atlantic’s products. Ensuring the company was still meeting consumer needs, before they realised they had them. Through difficult times after September 11th 2001, she demanded that new services offered great value to both the customer and the business. Playing an instrumental role to the three great commercial successes: the multi award winning Upper Class Suite, Virgin Atlantic Clubhouse at London Heathrow and the Re-launch of Premium Economy.

In August 2007 Dee took on the role as Director of Product and Service. Where her challenge is be to improve the profitability of the business with an entrepreneurial approach. Dee will combine her creative approach with her commercial acumen to give our customers a great travelling experience. That truly sets Virgin Atlantic above and apart from the rest of the industry.



Chris van der Kuyl

Brightsolid Ltd
dawn@brightsolid.com

CEO of brightsolid, one of the UK's internet pioneers (formerly Scotland Online)

Chris recently led the Company's acquisition of the Friends Reunited Group from ITV. The deal, which is currently going through OFT approval, will make brightsolid a formidable force in the online genealogy and social networking areas. Chris' expertise covers start-up, development and market listed businesses in the technology, media and entertainment sectors. He is Chairman of the Tayforth Group, which has interests in video games development, technology and intellectual property, and of 4J Studios, a next generation video game development studio. Chris' experience has equipped him in delivering successful and substantial fundraising exercises in the private equity, corporate venturing and listed markets and he has an exceptional track record of developing committed employees whilst keeping an ever-watchful eye on the bottom line. Chris contributes regularly to the business and enterprise agenda and is a member of the Global Leaders of Tomorrow Programme at the World Economic Forum. He is dedicated to helping build the next generation of business people by encouraging enterprise education in Schools, Colleges and Universities. He is also a member of the Smith Group, which advises Scottish Government on educational matters.



Steve Gill

PAIPR, University of Wales Institute Cardiff
sigill@uwic.ac.uk

Product designer and academic with 17 years experience in industry and HE.

Steve has designed or product managed around 50 products to market and has published 35+ academic journal and conference papers. He is currently co-writing a book on Physicality with Prof. Alan Dix of University of Lancaster called Touch IT. The book came out of the DEPTH: Designing for Physicality project, a research council funded collaboration with University of Lancaster. One of the outcomes of DEPTH was a much more in depth understanding of the role of the prototype in the design process, including, for the first time, empirical evidence of the importance of physicality in our interaction with computer embedded product prototypes.

Steve is a Fellow of the Higher Education Academy member of the Design Research Society and a member of the UK Arts and Humanities Research Council's Peer Review College.



Colin Burns

University of Dundee
colin@martach.com

Honorary Professor

Colin runs a one-man, virtual consultancy from his home base in Scotland. He employs user-centred design methods for corporates, SMEs and start-ups, in both public and private sectors. He helps them make the most of their creative resources - building new business or social value.

His recent clients include Tesco, British Airways, Castle Computer Services (Bellshill), Unilever, Rank, Forster Roofing (Brechtin), the Design Council, NESTA, Proserv (Aberdeen), Johnson Tiles (Stoke) and Scottish Enterprise.

Colin spent 15 years at IDEO – the international design consultancy, famous for its user-centred, interdisciplinary approach. He was the Director of IDEO's London Studio from 1999 to 2004. During this time, Colin worked with clients like Vodafone, Procter & Gamble, Hewlett Packard, Nokia, Prada and the BBC.

He is a director of several businesses, including a Scottish fine foods retailer. He teaches at the University of Dundee and Glasgow School of Art. Colin is a member of Globalscot – the Scottish Government's business leader mentorship programme.

He also plays bass guitar in the dodgy Perthshire pub band, "The Fat Dads".



Dr. Sarah Teasley

Royal College of Art
sarah.teasley@rca.ac.uk

Ph.D, historian

Dr. Sarah Teasley (Ph.D, University of Tokyo) is a historian whose research concerns the impact of new media, materials research and technological innovation on furniture design and manufacturing in modern Japan. She is a Course Tutor in History of Design, and Critical & Historical Studies Liaison Tutor for the departments of Design Interactions, Design Products and Innovation Design Engineering at the Royal College of Art. She has published widely in journals including Design Issues and the Journal of Design History; forthcoming books include Design in Modern Japan (Reaction), and the co-edited volume Global Design History (Routledge). Other current projects include a monograph, Stress Points: Materials Research, Design and Furniture Manufacturing in Japan, 1895-1965.



The inaugural Craft Festival Scotland is a nationwide event profiling some of Scotland's most exciting and talented practitioners.

A diverse programme of events has been scheduled across Scotland which aim to encourage the public to engage in and understand craft, including the Prototype Symposium and Handmade Nation by Faythe Levine, held in Dundee.

Scotland's craft culture is one of the most innovative in the world and over recent years Dundee has established itself as the global leader in craft research. The Past, Present & Future Craft Practice (PPFCP) project firmly positions Dundee as the key city for craft research and Scotland as a prolific champion for future craft. PPFCP is the largest craft research project ever undertaken in the UK for which Duncan of Jordanstone secured a record-breaking grant by the Arts and Humanities Research Council. Over a five-year period artists, designers and makers have explored craft as a process, product, experience and service. To date the project has involved over 40 practitioners.



This research inspired the team at University of Dundee to create the national Craft Festival Scotland showcasing the many faces of craft across Scotland. Events are scheduled across the country and are aimed at both families and academics alike.

Professor Georgina Follett OBE, Dean of Duncan of Jordanstone College of Art & Design, Deputy Principal of University of Dundee and Principal Investigator for the PPFCP project, said:

"The ambition of the Past, Present & Future Craft Practice project is unrivalled. With 40 practitioners and five years of investigation into craft as a process, product, experience and service, it is the largest craft research project in the UK. The achievements of this project are now reinforced with the equally ambitious Craft Festival Scotland. The programme of events reflects the quality, creativity and diversity in Scottish craft today whilst highlighting the outstanding potential for the future of craft both in the arts and across industry."



Dr Helen Bennett, Head of Creative Industries, Scottish Arts Council said:

"The craft sector in Scotland is in the midst of rapid change and the PPFCP project has demonstrated impressive vision in imagining and researching the future roles and directions of crafts practice. Scottish Arts Council recognises what has been achieved and has been delighted to support Craft Festival Scotland as a national showcase for the talent and potential of the crafts industry here."



The Craft Festival Scotland is an ambitious series of events to challenge perceptions and profile debates around craft including major exhibitions, film, symposium and a diverse educational outreach programme. The vision is to celebrate and champion craft's relevance in the present moment. It will initiate a range of national public events, portraying the different faces of craft and the different voices it has as a creative practice. It will focus on reviving the way people see craft and how children and adults alike can become involved in it - creating their own work, attending contemporary exhibitions, listening to artist's talks, watching a film or animation, becoming a collector or engaging in critical debate.



The University of Dundee is one of the partners in the V&A at Dundee project, which aims to develop a new centre of 21st century design for Scotland at the heart of Dundee's waterfront.

The V & A at Dundee will be an international centre of 21st century design. It will illuminate the design process, from spark to showroom. It will show how ideas are shaped, interpreted and evolve into items of beauty and practical purpose, enriching the way we live. It will showcase and develop the best of global and Scottish practice and by celebrating the creative spirit, provide inspiration through its role as exhibition venue, research centre and innovation nursery.

The V&A at Dundee will:

- * be a rich and inspiring resource for design and creativity.
- * attract visitors from Dundee, Scotland and further afield to world-class travelling and permanent exhibitions.
- * improve the attractiveness of Dundee and its region to business.



Cold War Moden:
Design 1945-1970
V&A Touring Exhibition

It is planned that the V&A at Dundee will open in 2014. The dynamic combination of a landmark building on a superb site and outstanding content will help drive forward Dundee's Waterfront regeneration and stimulate further Scotland's creative industries.

The project is being delivered by Design Dundee Ltd, a ground-breaking partnership between the Victoria and Albert Museum - the world's greatest museum of art and design - and the University of Dundee, the University of Abertay Dundee, Dundee City Council and Scottish Enterprise.



Selection of Printed Textiles
from 'Design on...' exhibition
Frances Stevenson 2009

An international design competition for the project attracted more than 120 entries from eminent firms around the world. In May a shortlist of six design teams was announced:

- Delugan Meissl Associated Architects (Vienna)
- Kengo Kuma & Associates (Tokyo)
- REX (New York)
- Snøhetta (Oslo)
- Steven Holl Architects (New York)
- Sutherland Hussey Architects (Edinburgh)

The V&A at Dundee is looking to create a landmark building, which will be sited at Craig Harbour right on the banks of the River Tay. The site is being made available through the Dundee Central Waterfront Partnership, the joint venture between Dundee City Council and Scottish Enterprise which is revitalising the prime area of land linking the city centre with the River Tay.

The V & A at Dundee will have wide appeal – to children and students, to design professionals, to business and to the general public attracting visitors from near and far. Its changing programme of major exhibitions and events will help position Scotland as a powerhouse in contemporary design. It will embody the enterprise of civic Dundee, contribute greatly to Scotland's cultural ecology and stimulate economic growth.

You can help by showing your support for the V&A at Dundee and the wide range of cultural initiatives taking place within the city.

Gareth Pugh
Fashion in Motion series
V&A South Kensington





28 May - 08 August
Dundee Contemporary Arts, solo
exhibition - residency - performance -
collaboration

This is the first major solo exhibition in the UK of Chicks on Speed (COS); an ever-changing multidisciplinary art group who apply punk-inspired DIY ethic to interrogate the boundaries of art, craft, fashion and music.

Functioning as both work in progress and a space to exhibit; Chicks on Speed plan to transform the galleries into a laboratory. Traditional techniques, shoe & fashion tailoring, tapestry, weaving, screen-printing, will be combined with new research in technical innovation. They will present the outcomes of collaborations with international and regionally based practitioners, deconstructing and re-defining established craft processes.

Chicks on Speed are working with an 'e-shoe' manufacturer Gian Carlo and shoe designer Max Kibard in Milan to create a prototype for a wearable shoe that also functions as a guitar. They will be discussing this work at the international symposium, 'Prototype: craft in the future tense', 10-11 June, 2010. Make sure you don't miss out on this unique event! To book your place at the symposium - [click here](#).



Wednesday 9 June 8pm
Dir: Faythe Levine

Handmade Nation documents a movement of artists, crafters and designers that recognize the marriage between historical techniques, punk and DIY ethos while being influenced by traditional handiwork, modern aesthetics, politics, feminism and art. Fuelled by the common thread of creating, Handmade Nation explores a burgeoning art community that is based on creativity, determination and networking.

In 2006 first-time director Faythe Levine travelled to 15 cities, interviewing 80 individuals. Levine captured the virtually tight-knit community that exists through websites, blogs and online stores and connects to the greater public through independent boutiques, galleries and craft fairs. Interviews were also conducted in artist studios and homes of the featured makers.

Faythe Levine will introduce the screening and participate in a Q&A session afterwards. This event is part of the Proto Type Symposium, co-convened by the Victoria & Albert Museum and Duncan of Jordanstone College of Art & Design, which is taking place June 10-11th 2010 in Dundee.

Duncan of Jordanstone College of Art and Design Visual Research Centre



The Visual Research Centre is a unique facility dedicated to visual arts research from initial concepts to final exposition. Unlike many other research centres, its activities are not carried out behind closed doors, but directly in the public view. Visual Research Centre is located at Dundee Contemporary Arts and run by Duncan of Jordanstone College of Art and Design.

At the heart of the VRC is Centrespace – an experimental flexible studio/gallery where research outcomes can be given their first public airing. State of the art audiovisual equipment enable multi-screen digital projections to be shown along side more traditional installations. Previous international exhibitions include the UK premiere of Nigel Johnson’s acclaimed Firefly; the realisation of de Moll & Delbrügge web-based How do you feel?; Designs for Life, led by Paul Harrison which explored the process of visualisation of laboratory data relating to aspects of gene research and Tik Tak Tok, a collaborative project with Skopje Museum of Contemporary Art, and Duncan of Jordanstone College of Art and Design.

For further information regarding the VRC, contact Jane Cumberlidge on 01382 388070 or email j.a.cumberlidge@dundee.ac.uk

10 June – 9 July
Centrespace, Visual Research Centre
Dundee Contemporary Arts



Crossfire Series,
 Geoffrey Mann 2010

Knowledge through making exposes a fantastic range of contemporary work by the leading product artist Geoffrey Mann, the innovative metal designer Drummond Masterton, highly acclaimed jeweller Georgina Follett, renowned Scottish colourist and textile designer Frances Stevenson, ceramist Lara Scobie and the edgy interactive jeweller Hazel White.

While in Dundee, why not visit and see what they have been up to recently?

To coincide with Dundee Contemporary Art's Chicks on Speed exhibition and Craft Festival Scotland, DCA Shop has selected a diverse range of emergent artists working in jewellery, textiles and design. Encompassing a wide spectrum of ideas and techniques from DIY Craft to the fusion of traditional methods with technological innovation, these artists offer a spirited take on contemporary craft practice and an alternative to mass production.



The Pop Up Shop is part of our continuing Craft Focus programme of local and national applied artists displaying high quality, innovative work for sale.

Alongside Chicks on Speed fashion merchandise DCA presents the following artists:

Paula Barclay - www.paulabarclaydesign.com - A Dundee based designer producing screenprinted t-shirts and tote bags with an ethical message.

Dean Brown - www.mrdeanbrown.co.uk Product designer and graduate of Duncan of Jordanstone College of Art and Design, we are presenting his 'Audio Can' design for portable MP3 speakers.

Tusheeta David - www.tusheeta.com - Tusheeta utilises hand dyed acrylic, laser technology and thermoforming techniques in her sculptural Veiled Existence jewellery range.

Jane Gowans - www.janegowans.co.uk - We will feature a few pieces from her 'Grope, Point, Slap...' range as well as new precious metal and enamel jewellery developed during her year as artist in residence at Duncan of Jordanstone College of Art and Design.

Hilary Laing - www.hilarylaing.com - Glasgow based fashion designer, we will feature her handmade, expressive and colourful dresses, hosiery, scarves and bangles.

Lucky Bird – A London based designer, using otherwise discarded materials in her recycled shopper bags.

Syrah Jay - Graduate of Duncan of Jordanstone College of Art and Design, Syrah Jay epitomises DIY craft and anti-consumerism with her unique necklaces and bangles made from specially sourced recycled fabric.

For further information regarding the DCA, please visit the website on <http://www.dca.org.uk/>

Past Present and Future Craft Practice

"Prototype - craft in the future tense" arose out of the "Past, Present and Future Crafts Practice" (PPFCP) research project based in Duncan of Jordanstone College of Art and Design, University of Dundee. Funded by the Arts and Humanities Research Council and undertaken by a core team of five researchers, this 5-year project is investigating the future role of craft, analysing craft aesthetics and evaluating its economic significance.

PPFCP's aim for 'Prototype' is to help articulate craft in the context of the post-discipline arena and to further understand craft as a holistic process of thinking through making. It is to open up the dialogue, develop new conversations and in turn, further appreciate its value as an intellectual pursuit.

The reality for craft is that the word "craft" continues to provoke debate between historians, academics, journalists, practitioners, artists, designers and industry, and it is not surprising that some of the debate is contentious and no single definition seems to suit all. Indeed, craft takes on different meanings dependent on whether it is being used as a noun or a verb, and changes depending on the context within which it is used. The noun, for example, defines the objects of Craft, sometimes categorising them as traditional, contemporary, vernacular, hobbyist or fine. The verb describes the maker's creativity and creative process, which includes their skill, knowledge and aesthetic reasoning. Through the prototype symposium, both noun and verb will arise, and it is our wish for the dialogue to be useful, interesting and provocative.



DUNDEE MAP



VENUES

-  Duncan of Jordanstone College of Art & Design
-  Dalhousie Building
-  Dundee Contemporary Arts
-  McMannus Galleries
-  Queens Gallery
-  Parking



Georgina Follett

Tracy Mackenna

Rebecca Leiper

Malcolm Finnie

Jamie Eason

Paula Francis

Diane Scott

Mhari MacDonald

Helen Bennett

Emma Walker

Victoria Hale Wylie

Jane Cumberlidge

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