

Cumulus Working Papers

London–Vilnius

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London

27–30 May 2009
Cumulus conference
Challenging the Challenge
London, Great Britain

Cumulus Conference, London 2009
Confronting challenge with change

27–30 May 2009
The O₂, Greenwich Peninsula, London SE10 0DX

OPENING SPEECH President Christian Guellerin

Who will we be, where will be, what will we do in 5 or 10 years?

“Cumulus is a platform for exchange: it has no policy to impose what may be good design, good models of development for our institutions, good programs, good research or good development... it imposes nothing but proposes to all to learn from others. (...)”

Dear Cumulus members, as I already told you before Cumulus is in good shape. Ours is a very active association that keeps growing and is actually about to welcome onboard 14 new members during the upcoming General Meeting in London, an association whose events have already been scheduled until as far as 2016. Born nineteen years ago Cumulus is a vibrant and deeply humane adventure led by an outstanding social network of 150 design, art and media education institutions and creative schools from all over the world.

No doubt we had a fruitful, enriching and exchanges during our meetings in London, Melbourne in 2009 and elsewhere in future. The high quality of our exchanges will highlight the high-spiritedness, the dedication and involvement of our team, thus showing how much we enjoy working together with a view to fostering the right type of education in creative skills and design and thus improving our institutions and bring to the fore the activities of our researchers and the talent of our students.

It has now been nearly 20 years since Cumulus came to life – we will celebrate the 20th anniversary in Shanghai in September 2010 – and it has therefore undergone much change. Originally rooted in European Union Erasmus program and the will to promote student mobility all over the European territory, Cumulus has over the year become global, thus mirroring the world surrounding it. The way we understand the world, the way we teach design, the social and economical paradigms have greatly evolved over the past 20 years. Institutions in our area no longer focus upon the same issues.

Guided by intuition and relevant premonition the members of the Board naturally came to address the evolution of Cumulus: Who will we be, where will be, what will we do in 5 or 10 years? The reflection initiated by the Cumulus Board in Saint-Etienne France in November 2008 and then furthered in Istanbul Turkey early 2009 during a 5-day seminar is still a work-in-progress. Like all strategic thought processes, the work we have undertaken here is totally devoid of deterministic considerations. This enabled us to point out our network's assets and weaknesses, to define its role and duty, to determine what could be done and what couldn't.

However before describing our actions, I would like to reassert our value, to say once again that we can pride ourselves in the wonderful dynamism and efficiency that are ours. Though we have but a very modest budget we can guarantee permanent membership to our members even in these (economically) troubled times.

I would also like to say how grateful I am to TAIK of Aalto University in Helsinki who has been partially financing us and to the skills and dedication of Eija Salmi, Justyna Maciak and all other members of the university who have in some way contributed to our initiative. I would also like to thank all the Board members who have never faltered in their effort to keep improving Cumulus, and all the active members of our network, who have always been thrilled to promote our activities.

1st part: (Saint-Etienne, France
– November 2008)

Context evolutions: Globalization – Sustainable Development – Internet and Social Networks – Design, a management-oriented strategic and economic discipline – Work-based Curriculums – Research – The fruitful triumvirate “research – education – design”

Globalization

The world has become global: we must now strive to train designers that will be in a position to grasp the world and make sense out of it while preserving its identity. The need to go global is central to all development-related issues underlying all higher education institutions. Sending our students to partner universities for a few months and have them come back to obtain their degree from their mother-university is soon going to become an outdated practice.

The process launched by the Bologna Treaty enables students to travel freely and will ultimately give them

the opportunity to attain a Bachelor's Degree in their native country and to pursue their Master's Degree in a foreign country where they find curriculums more in tune with their career objectives. With this new trend all our five-year academic and economic models are going to be shaken and questioned. Our institutions will be deemed relevant only if they manage to attract foreign students so as to make up for those who decide to further their studies elsewhere, abroad. Therefore schools and universities are about to embark on a fierce crusade to recruit the best students. In this ruthless fight for the high-minded, countries known for their English proficiency will no doubt see in it a significant advantage.

The least well off institutions will have no choice but to strive to make a difference if they want to claim their spot on the world map, and to do so they are going to have to implement Master's Degrees whose content really makes sense in that it is intricately linked with technological, economical, social and cultural opportunities offered by their geographic location.

What is Cumulus' ambition?

Cumulus is a platform for exchange: it has no policy to impose what may be good design, good models of development for our institutions, good programs, good research or good development... it imposes nothing but proposes to all to learn from others. Cumulus is developing through an economic model which is not a model of consumption, it is a model based on the contribution of all.

The ambition is clear: it is to become the most important "platform for exchange" in Design education in the world.

The role of Cumulus

Cumulus' activities are based on the contribution of its members and the sharing of knowledge. An economy based on contribution is an economy based on knowledge.

The Cumulus Executive Board aims to:

- ensure members can discuss the main axes of development in the domain of design education and creation and adapt to sociological, economic and legal developments.
- promote the activities of its members
- maintain and coordinate the development of the network

The operational aspects of these activities are led by the General Secretary in Helsinki, who also ensures that the two annual meetings, one in Europe and one outside of Europe, are well organised and of a high standard.

The meetings are an opportunity to:

- attend conferences on a particular topic
- bring together sub-groups to discuss a variety of topics
- visit partner institutions
- Encourage exchange between its members, particularly in the context of social events

The meeting in Europe constitutes a General Assembly which aims to chart the progress of all of its activities, including:

- lobbying
- promoting institutions and participation
- reporting back on activities and work sub-groups
- organising events, competitions etc
- promoting students' work
- new members
- organising forthcoming meetings

Work to carry out / Future Plans

Develop lobbying strategies with regards to international institutions

The General Assembly in London was again one of the opportunities to report back on the lobbying activities we have undertaken. It seems that the recognition of Cumulus has reached a turning point with the signing of the "Cumulus Kyoto Design Declaration" for which we obtained the support of a number of organisations. The signing of the agreement with EIDD and soon with AIGA will give us even more visibility. We are working with BEDA on the same basis.

We are increasingly asked to participate in international events in the field of design. We think that this participation will give us greater political recognition with regards to large international institutions. This recognition is one of our main objectives.

Increasing the visibility of Cumulus' activities

Cumulus produces a lot and we are not visible enough, especially on the Internet. The conferences which are published after each meeting need to be more visible and we need to promote the work of our sub-groups. We have asked the General Secretary to rework the website to make it possible for us to circulate information gathered during our events.

The findings of the groups "Sustainability", "Cure" and "digital culture"... justify the activities we organise to share knowledge. It is imperative that our work is seen and recognised. It is an opportunity to promote our activities and to join together with other partners interested in similar topics.

In London, we will present our project for a digital platform which will allow us to share students', teachers' and researchers' work.

Promote the emergence of new Cumulus sub-groups

We need to cross-pollinate the work of Cumulus with each of its members, in particular, by creating other subjects which could make up a sub-group. Whether it be material libraries, employment or dual degrees, it is an opportunity for Cumulus to go a step further by offering topics which are of international relevance.

Promoting the "Cumulus Kyoto Design Declaration" and the "Cumulus Green" award

By signing this declaration, we have gained international recognition for Cumulus. With the organisation of the "Cumulus Green" we will extend our work to determine the most effective action to take in terms of sustainable development.

Promoting research

It is not about imposing our ideas or adopting a political stance as regards design or what research into design is or is not. Nevertheless, we are aware that research is paramount for the recognition of creative disciplines by academic institutions. Cumulus must bring to light the different approaches and initiatives of its members in terms of knowledge production.

Promoting the network in areas where we are under-represented

Due to the diversity of nationalities of the members on its board, Cumulus is represented on an international scale and has a wide sphere of influence. We need, however, to go even further. We are particularly under-represented in the USA, South America and Africa.

After Melbourne, we will go to China, the USA, South America and South Africa to continue to spread our values.

Promoting the development of Cumulus members

Each meeting is an opportunity to promote our host institutions. We can also promote other events either by participating in them or by promoting them on our website, which should constitute an international database for all news relating to "design education".

Promoting the students' work:

Our recent participation in the competition in China, "Earthquake" and the organization of "Green award for students" illustrate what we do. More generally, we must encourage the members who host conferences to organize expositions of students' work.

Promoting employment and professionalization:

This issue has not yet been addressed by Cumulus, although it is at the heart of all the institutes' concerns. In London, we will present a strategic plan to promote

the employment of young designers and creators. This is an opportunity to promote design, creation and innovation by establishing contacts with companies.

Offering new services via our website:

Job offers, conference dates, on-line lessons, students' work, international competitions... the list goes on. This project will be carried out in partnership with the IT services of the TAIK in Helsinki.

Conclusion

The activity of Cumulus is impressive considering its modest structure. The operational budget is limited to the contributions of its members. We must thank the General Secretary in Helsinki, who has done remarkable job. The Aalto University and its TAIK and its collaborators should be mentioned for their precious help. Thanks are also due for the members of the Board, who have given much time and energy towards the development of the association. We are all frustrated at times not to be able to go faster, stronger, farther. Nevertheless, we can be proud of what we accomplish together. Bravo to all the members, researchers, professors, and students who contributed their work and their ideas.

We are participating in a work of collective intelligence from which will emerge a new political economy. At a time when consumer society no longer satisfies the individuals that we are, the culture of industrial creation will play a key role in this new economy of contribution. Design may have the responsibility to bring about a new capitalism that is more ethical, to which Cumulus has the responsibility to contribute.

Christian Guellerin General Director
President of Cumulus

KEYNOTE Dr Angela Dumas Art and Science of Beginnings

Here we all are in the O2 Centre. What stories and dramas surround its beginnings as the millennium masterpiece. In its short life it already has a lot of experience. And just next door on site will be the building that creates the new Ravensbourne. Ravensbourne, as the hosts, have asked us to consider design education, in this age of digital media – as a new form of beginning for design.

I want to add an additional question which is: How might a new beginning reconfigure the way design is understood – not just in the training of designers – but also more widely as the training for a new mindset that can enable entrepreneurial teams to work better together in the future.

And so – to – beginnings – but first – an apology – I am about to deliver a monologue – not even any pictures – and – no jokes – and – in the course of talking – paradoxically I am also going to make a case against the way I am delivering what I am saying – the tradition of monologue – but I humbly ask you to listen – and thank you in advance for your powers of concentration!

The first important thing for me to say is that we have a dynamic between change and continuity that is ever present in beginnings.

We can all begin again, start anew, change the way we do things. Facing up to new challenges is an essential part of being human. The zest for innovation is so deeply embedded in us, that, without formal training, we can all draw on our past experience and our knowledge and renew and re-configure almost automatically.

But there is something else, as deeply embedded in us. Where we value continuity over change, and that likes tradition and the comfort we derive from a sense of belonging. Many of us do not like the idea of striding out for the unknown. This part of us works tirelessly to maintain the status quo, and to avoid seeing the need for change. As with innovation, without formal training we know how to collude in this resistance to change.

When we can recognise the dynamic between these two conditions, then beginnings have a particular frisson, and when we use this to advantage, the life, the

zest and the creative tension, make beginnings a fascinating and good experience.

By the time I get to the end, I hope you will like the idea of treating beginnings as an entity in themselves – a creative place to work – in the dynamic between the push to make change and the resistance to make no change. Not often do we acknowledge the extent of the power of this dynamic. So I believe we must employ conscious application to the whole business, and bring to the fore our capacities to be honest, humble, curious and brave, and not fall prey to collusion. In doing this we must be open to different mind sets and alternative ways of working with one another.

Over many years, I have talked of the need to give greater attention to beginnings and the need for innovation here – for a change in the mindset – about beginnings. Because when beginnings are overlooked or done badly there is an extraordinary waste of knowledge and potential, which is dispiriting and demotivating, but also economically unsound. Perhaps worse, the seeds of destruction become laid down in the DNA of the new initiative, microscopic flaws that will go undetected; and which inevitably emerge later undermining both the strength and the scope.

So what constitutes a beginning?

Let's start by thinking about what the absence of a beginning looks like – where there is no discrete time set aside for a beginning but where there is just the start. I am not merely playing with words here but referring to the situation where there is little or no recognition that we must do this as a conscious act of caring for the initial frailty of a beginning.

Instead we are in haste to get going and so we allow the action, the energy and enthusiasm engendered by the promise of the new to be the signal that we are ready to start. We can easily become committed by a persuasive, and probably eloquently argued, treatise of the future or a fanciful set of numbers on a spreadsheet. Either of these kinds of documents can assign reflection and open ended questioning as the voices that carry misgivings – as negative – and these voices are encouraged [if not directed] to fall silent. We have all been guilty of this at one time or another – it is a part of our nature too.

Sometimes it doesn't matter. But there are initiatives – and these are the ones I am concerned with – where it does matter. Global or local, public or commercial,

where innovation or potential innovation is in effect a public good.

A few years ago, I was involved in a competition to improve affordable housing in the UK, an initiative that came from the Deputy Prime Minister's office. A key element of the competition was to increase in the design and construction process the number of manufactured and pre-fabricated elements of the kind commonly in use in other parts of Europe but less usual here. A further element was to improve the speed with which the houses were built. I was one of a panel of people involved in the selection of teams of architects and house-builders, and I had not been involved in the beginning.

After the selection of the first tranche of teams and as they began to move closer to building the homes, it became apparent that the projects involved few, if any, new pre-fabricated elements. There was talk of the house-builder and architect teams breaking the terms of the competition – there was talk of a breakdown of trust.

At the next meeting, I asked a few of the teams what it had been like to talk to manufacturers about the proposed new design elements. Most of the teams were enthusiastic about their meetings, but the manufacturers needed more time. They required a significant number of months for testing and prototyping and none of this time had been factored in to the competition framework. Quite simply had the beginning been crafted correctly, there would have been recognition of what was needed to innovate for a pre-fabricated element and the teams would have included the skills and know-how of the manufacturer. Sadly, at least for me, in the final report the issue was discreetly glossed over. The resulting homes are nice but they are neither low cost nor pre fabricated.

In the race to the start, as I mentioned before, what gets laid down, albeit microscopically, are the flaws that will burgeon overtime. They become the intractable issues of the future, as with the absence of the manufacturing know-how in my example.

But difficulties are often the hallmarks of new initiatives, we take them so much for granted, so if they are not to derail we need to change the way we think about the beginning and to challenge the idea that initiatives are bound to become burdened at a later stage by dispute. So is it just a form of arrogance, when we think that we don't need this time for the beginning of an innovation initiative, that we already have all the answers?

The promotion of innovation and the important role it must play in our futures has become ubiquitous. But the understanding we have about the intricacies in the process of innovation are not as developed as is our rhetoric.

Innovation is a social and collective process. It is important also to be mindful that innovation is a collective, social and creative activity, so it is seductive in a way that invention is not.

Innovation may take benefit from raw invention as a resource and may well use design in a process sense. But innovation is neither invention nor design. Innovation is to bring in new methods and ideas, and to make changes to something existing, something that results in an aspect that we can all consider or experience as new. An innovation is likely to be the result of an exploitation of an invention, or perhaps a proliferation of an invention often using design – as something done to the original that makes it operate in a different form and appear perhaps newer than it actually is.

Invention can be and often is lonelier. It is certainly slower since it typically includes research and the business of groping around in the dark, and as a result it attracts a different kind of individual – even when invention is about team playing it is more of a closed shop.

So here I am very definitely talking about the need for a more sophisticated stance on beginnings for innovation and not for invention.

Why? Because it is very hard, if not impossible, to race for the start in invention: a breakthrough in invention may happen in a flash, but the work to arrive at that point will have been lengthy and arduous. Not so with innovation where it is always the case that an existing resource will be being used. Though the ideas about the use of the resource might come quickly, this is exactly why there has to be the discipline to put in a beginning – it is so easy to think that we know it all already and not to ask hard and searching questions of our idea. Ideas can be seductive things especially when as in innovation they draw upon existing resources.

It is also why innovative activity is no stranger to the behaviours of the kind that Malcolm Gladwell refers to in his book the Tipping Point, whereby small differences in the start give rise to very different outcomes, that might be good or bad, later in the process.

We can think about the social and collective nature of innovation from a number of useful perspectives, and gain important insights from them. Some I am going to mention in this talk include, something on self organizing systems, some ideas about emergence, a snippet from the research of neuro scientists and a story from an anthropologist.

The more insight we can garner about how it all works the better. We need all this in order to have a greater understanding about how an idea or invention when put to work as an innovation walks a fine line between successful and corrupted exploitation.

My views on innovation have tended to stand outside the mainstream, and the predominant rhetoric over innovation has had the effect, intended or otherwise,

of spawning a culture of innovation that is quite macho, synonymous with speed, with novelty and success measured as rapid growth and financial return. This culture has never encouraged the aspect that I am talking about, the crafting of a beginning, where both the artistry required in the orchestration of all relevant mindsets of all the players is present alongside an absolute commitment to rigour to leave no stone unturned.

The financial and economic world crisis is an example of how macho innovation can go awry, and further, how it does not necessarily start with anything other than good intent. Our crisis came as the result of the use of a mathematical invention from which to innovate in the management of financial risk. The initial work that spawned the initial innovation led to the emergence of a new way to understand and to use a financial instrument and to make a market. Quite rapidly there were only a few people, and possibly only the originators of the new techniques, that truly understood the ramifications of the initial mathematical invention.

Emergence – Ideas leave the equivalent of a chemical trail

Michel Foucault, the French historian and philosopher, has a way of describing newness that has always provided me with an insightful picture, and a way to imagine innovation. He describes newness as a surface of emergence.

One of his examples of a surface of emergence, is over the emergence of the idea of mental illness rather than madness. He tells us that it was not until medical science was sufficiently developed, so that we could begin to understand the physiology of the brain that we were able to move away from the simplistic concept of the madman. Not until then could the existence of a house for mad people be replaced by a concept of mental illness, a change in our sense of social responsibility and the development of treatment.

I like Foucault's concept of emergence I find it provides a very graphic model. I have always visualized this surface of emergence as starting as a lattice that grows in substance and complexity, becoming a glistening surface emerging gradually as though from the sea, at first it floats glimmering and only just palpably there, where one minute you see it, the next you don't, and gradually it becomes the thing of significance that is ever present.

Another and different but equally useful example of emergence comes from Steven Johnson who provides another insight and a way to think about the mechanics of innovation. Perhaps he also helps us to think about the financial innovation muddle differently and to consider that it is not solely about wickedness or even greed – though when I tell you that Steven Johnson is talking of slime molds you might think that I am being disingenuous.

Steven Johnson is interested in self organising systems in particular as a way to consider the design issues in computer technology. In his book called *Emergence*, he pays tribute to the two scientists, Keller and Segel, who discovered the truth about a simple self-organising organism known as a slime mold. Before the research by Keller and Segel, the conventional belief was that slime mold cells swarmed at the command of "pacemaker" cells, but they discovered that each individual slime mold contributed, and could in effect count, because when the individual slime mold registers a sufficient number of trails made by fellow slime molds, it changes its behaviour and they swarm and then all coalesce.

When we see slime mold they are at the stage when they have already coalesced, and are nearly at the end of their life cycle, they are the typically yellow brightly coloured fungi type things sitting on the bark of fallen trees.

It is the density of a chemically coded message or trail that is the vital trigger for the transformation of the single invisible slime mold cell into an identifiable and often quite large mass that has a physical presence. Imagine then that our ideas, our innovative activities, also have or create trails. Of course they do in a way often from low level beginnings, ideas and potentials get thought about and talked about, if we never hear or think about them again, they disappear just as quickly as they arrive. But when the talking continues to occur, or even when a small amount of work begins then it amplifies the density of the idea or potential increases and it gains a physical type of presence which people are able to refer to.

Gillian Tett, the financial journalist and social anthropologist, who tells the story of the development of derivatives and the team at JP Morgan in her recent book called *Fool's Gold*. Gives another way to think, providing a story that is about the equivalent of the coded message, creating density and leading to a form of herding if not swarming. Gillian Tett's story starts as she describes attending a conference in Nice on credit derivatives.

"Walking into the gathering for the first time was a disconcerting experience. The hall was full of young men and women, decked out in the smart casual wear that is the unofficial conference uniform of the city or Wall Street... References to billions or even trillions of dollars were casually tossed into the conversation. Yet much of the time, the bankers avoided direct reference to any mention of what companies or consumers might do with the money, such as building factories or buying food, instead finance was presented as an abstract mathematical game that took place in cyberspace, and which could only be grasped by a tiny elite.

Finance was not about grubby cash, but about a string of mathematical equations ... as I looked around me in that Nice conference hall in spring 2005, the same approach I had once used to decode Tajik weddings seemed useful in the credit derivatives tribe too... Both events allowed an otherwise disparate tribe of players to unite, to mingle...

Forms of behaviour like these, re-inforce a dominant ideology, and the cognitive map that unites a group. We are all making a form of a trail until the density or intensity is such that we have something sufficiently visible or present to be named. There is a difference between us and the simplicity of the slime mold code, all slime molds emit the same single chemical message, and so here we must abandon the comparison. Predominantly we rely on the use of language, it is as though the chemical messages are of slightly different compounds. Yet when we think about the conventions of language and our use of jargon, Gillian Tett's bankers, the designers here in this conference, professionals, specialist groups, separate divisions within companies, we all emit the equivalent of a chemical trail, non-recognisable to others groups but clearly sensed within the group.

The JP Morgan derivatives team was engaged in the banking equivalent of space travel. Computing power and high order mathematics were taking the business far from its traditional bounds and this small group of brilliant minds were charting the outer reaches of cyber finance – just too seductive. The apparently successful beginning of the JP Morgan team contained the DNA, the origins of the subsequent crisis when JP Morgan persuaded AIG to insure the super senior debt tranche at a tiny premium, ignoring the inherent risk and sowing the seeds that later led to Government bailout. And the many who jumped on the bandwagon with subsequent innovations that built on the original idea definitely did not comprehend the surface of emergence as Foucault would describe it and absolutely did act solely in a swarming sense as do the slime mold.

We are in no position to consider that the slime mold type response to a chemical trail is inadvisable or bad, since it seems to be what happens, so it is vital that we try to work hard on the clarity of the coded message. The analogy that the slime mold provides us with is this: the code that is locked into the chemistry is an attractor to the resource.

The responsibility for leaders is to ensure an uncorrupted, even perhaps uncorruptable, code. For once out there then it is the case that it will have a life of its own as density builds.

Crafting the beginning is a leadership role

From this perspective, leadership in innovation takes on a subtly different form from the visionary and swathe cutting aspects of macho leadership. It requires instead and among other things a great curiosity as to the workings of differing mindsets and an enthusiasm to listen and learn, and finally the will and ability to orchestrate these into the correct code from which to begin. Here we have a leader who is confident of their own capacities to the extent that they have no need to focus upon self promotion but rather will work to promote the capacities of others. A leader who endorses the creation of a good beginning through example and through the crafting of an inclusive and collective culture, a culture that has an appetite for difference. This is quite a tall order for all manner of reasons, not least because a leader must be supported in all of this by his or her board members and this attitude to leadership and management has not been the commonest of conventions of boards. The benefits of really working in the way I am suggesting are not well understood. A board that would see itself as the orchestrators of innovation processes, a dialogue type culture, would be a rather different form of board – nice but not usual – I rather flipantly put Socrates into the title of my talk and since I did not remove him later, when I had the chance I must now provide you with the rationale for doing so or be hoist by my own petard.

Socrates's great innovation was dialogue

So now to address ourselves to Socrates. Here we have an innovator and a leader.

The enigmatic Athenian of the fifth century BC is credited as one of the founders of Western philosophy. He wrote nothing and so what we know of his beliefs comes from the pen of Plato. As a result the beliefs of Socrates have, I believe, a somewhat mythical quality to them. Nevertheless, the Socratic method of inquiry is what I was thinking about as I gave my title. Briefly, this is the process whereby an issue would be broken down into a series of questions, the answers to which gradually distill the overall answer required. Apparently, Socrates said his wisdom was limited to an awareness of his own ignorance. He also claimed to be more of a midwife than a teacher, and was capable of being extremely caustic over the power of rhetoric which he referred to as the *art of pandering*.

Making a challenge to rhetoric is important to beginnings because rhetoric often dominates, we see it in the persuasively managed presentation, which is in effect rhetoric, and that wins the formal agreement to many innovation projects.

Socrates made his innovation in reaction to the way that speech was increasingly becoming, "a war of words". A monologue and not a dialogue. And, Socrates consid-

ered that individuals could not be intelligent on their own. (which is why I have co-opted others in my use of quotes to help me!)

This is brought to life very well by the historian Theodore Zeldin, who reminds us that we must begin by thinking about democracy because it was this invention that required people to say what they thought in public.

Democracy led to the need for the art of eloquent speaking. Initially the training was lengthy but impatience rapidly led to a shortened training in disputation. The training in disputation widened access and enabled many more people to participate. Zeldin remarks that

The ability to speak persuasively became the new excitement, the intellectual game, turning politics and the law courts into entertainments, with orators competing against each other like athletes, but with greater magic power to stir emotions.

Socrates in looking at the existing resource found a new way to utilise it and thereby to innovate. Zeldin again:

His brilliant idea was that if two unsure individuals were put together, they could achieve what they could not do separately: they could discover the truth, their own truth, for themselves. By questioning each other and examining their prejudices, ...never attacking or insulting, but always seeking what they could agree between them, moving in small steps from one agreement to another...

If we translate his innovation using the jargon of today, we can say he was the first to have proposed a knowledge society. Here's how:

- He was the first to advocate, encourage and facilitate cross functional debate
- The first to suggest that we should recognise that our perceptions are constituted from our experience and that these all too easily become prejudice
- He encouraged open mindedness and that the pursuit of friendship encourages curiosity
- He taught the value of going at things in bite sized chunks, as the best way to build new knowledge

Wandering through Athens through the markets and meeting places, Socrates demonstrated how dialogue worked, accosting artisans, politicians and people of all callings, questioning them about their work and opinions.

Just imagine what Socrates would have done with our electronic media capabilities – the world and not just Athens would have been his oyster!

So now to put Socrates and design together

Designers, artists and engineers share some very valuable, and these days almost unique, aspects of the mindset that underpins the Socratic method. However, what is not at all Socratic is the silo mentality that exists, albeit tacitly, in design. This silo mentality holds design back. Designers work on projects that are innovative, but this is not the story of innovation across design itself; in design education, in design practice, in the structure of design consultancies, or in their strategic collaborations with other enterprises. There has been little significant change one generation to the next. Technology has wrought the greatest of changes, but in design education and practice the tendency has been reactive rather than proactive. Design purposefully or otherwise, demonstrates a tendency to defend its boundaries. There is no need to defend territory, to ring fence or maintain that it is better than others. Far better to use it in order to interact with other mindsets because again by permission of Theodore Zeldin;

when minds meet, they don't just exchange facts: they transform them, reshape them, draw different implications from them, engage in different trains of thought. Conversation doesn't just reshuffle the cards: it creates new cards.

Quite literally, it's good to talk.

I consider that the mindset in design can be used more proactively and to better purpose in a way that is genuinely more collaborative.

The values in a design mindset should be used more innovatively

At the core of the design mindset is the capacity to work tirelessly but purposefully in a frame which, from the perspective of some other mindsets, appears to be intolerably ambiguous. The design mindset can go on searching around for a potential route. Messing about where one bit of puzzle appears to fit only to see that it renders another bit unsuitable – and where anyway – it is deemed far too early to even give a decent account of the puzzle itself. This mode of thinking, this skill in working and managing in ambiguity, the fine arts and design do to extraordinarily good effect. It is not even understood as risky, in fact it is seen to be quite the reverse. It is this skill set, this mindset, that can make an immense contribution to a collective initiative in innovation.

And design education teaches this skill. It introduces students to this mindset through the discipline of projects and their critique, and through the mode of talking through their propositions, in effect it is the first thing that is taught. Though of course it is not named as learning, I just wish it was. It is tacitly transmitted. Taught experientially through project work. Those of us

who have taught first year students know that many of them struggle to shake off their previous and predominant mindset of school and exams, if we needed proof that it doesn't always come naturally – then here it is. I believe there is great value to be had from making this new mindset explicit so that it can be understood as a skill that is valuable in innovation process. It is perfectly possible to teach some aspects of it beyond design. Thus for many years I taught it to MBA students. It is very different from the mindset that is prevalent in Business Schools. And it's not a bad thing to know more about this mindset since it dominates in many industries where design collaboration must regularly take place. Business School teaching is interactive and is usually not a monologue, there is plenty of interaction as case studies are discussed. But after the discussion students expect to arrive not in some still ambiguous place but in a neat, place, normally formulaic, with unambiguous lessons.

This story I am about to tell was a part of my learning curve, and I tell it so as to make sure that I am not making light of the issues in collaboration and integration – one mindset to another.

About a year into my research work at London Business School, and a year after I stopped being a working designer, I made my first visit to Harvard Business School with Earl Powell, who was then heading up the Design Management Institute, to meet two very senior professors in Production and Operations Management. I was to talk about my research and we were to hear how they intended to conduct their first research programme in design. We were both excited by the invitation. As we sat and listened to them I became perplexed and then quite anxious by their plans. This is the gist of what they said. They were taking a single industry and one product category, a photo copier. They intended to establish the best management process for excellent design. They would begin by rating the design features of all individual products already in this market and create a ranking in terms of performance and style. Using these results they would talk to the top three companies using a questionnaire about the operational structure and strategy in use for product development. With the results they would have the means to create a definitive management model for design excellence. This could be taught to MBA students and also used as a model by other less successful companies. Of course their logic was clear. But as I sat there all I could think was how could these people, who I considered to be so smart, just simplistically assume that all you needed for an excellent design was a good operations management process.

When I commented that while a good process is desirable it cannot guarantee an outcome of good design, there was a silence, I was as deferential as I could be, but I needed to say that there are less tangible and prob-

ably unmeasurable qualities important to good design and this knowledge is important to collect too.

What did I learn that day? That the mindset of an eminent Harvard professor is predominantly concerned with forms of measurement and assessment that can and should lead to clear tangible outcomes. I learned that I did not understand their mindset, but also that I would have to learn to understand it and to be able to work alongside it, if I was to be able to challenge any aspect of it.

I stress again that it is worth remembering that it is this Harvard type mindset that has been the most influential in all business school teaching and as a result it is still influential in business around the globe.

I learnt another good lesson early on at London Business School, this time from a fellow PhD student. She was a lawyer. Designers, and at the time that still included me, have an arrogance about them in believing that they are the observant ones, more aware of their surroundings than others. One day, as we were leaving the hallowed corridors of the senior management team and board members at London Underground, my colleague remarked that she hadn't realised how important one individual was to the whole group. I asked her how she knew – no one had mentioned him in our interviews and we hadn't met him. Oh, she said because he has the office next to the Chairman – I noticed the name plate. We compared notes: I knew the manufacturer of the carpet and the wall covering and all the colours; by contrast, she knew every name on each door. It is a matter of mindset as to what you observe. The lesson, there is almost always greater value in the combination of mindsets if you can achieve it.

I learned another lesson from the Harvard experience, which was that there is much to be said for displaying an unshakeable confidence. And so now let me say that I consider that there is this fantastic resource in design institutions and in the design industry

So may I make a suggestion, as a first proactive but tentative step, I would suggest that it would be worthwhile to consider how to teach aspects of the design mindset in a more explicit fashion. Also, though this would require some collaboration, to consider making a short course on the nature of other mindsets. Rather in the way that religion is taught these days, as comparative. Designers are at a disadvantage when they cannot easily interact with the predominant mindset and often this is the one that values measurement above all else. Which is why I suggest that mindsets need to be considered rather in the same way as the teaching of comparative religion. No one mindset being seen as better than another – just different. This could quite possibly involve a number of industry sectors, and of course, this kind of interaction is relatively easily achieved through digital forms of collaboration.

The frisson that comes with the recognition of difference is when the opportunity for questioning can take place – and it is this that opens up meaningful conversation. Think about it as a portfolio approach to mindsets and to collaboration. No single mindset must appear to be in the ascendant and all mindsets, including those that appear at first sight to be negative, need to be considered as equal.

We are coming back to the dynamic that I mentioned as I began this talk, where our need for newness and to look forward to our future comes up face to face with our equally strong need for the security of the status quo.

Respecting the tension between newness and the status quo

Never should we attempt to gloss over this because the unsettling tensions are real. Most individuals know that lives can be dramatically altered, people lose their jobs, and/or their status. Some benefit, others lose out. The pre-knowledge about this always has a material affect on the innovation process. It is a factor affecting more innovation initiatives than anyone is prepared to own up to. And often here in the reservations and fears of those individuals who have a powerful resistance to the new, there is something of immense and critical value to innovation to be found.

Foucault refers to the advances in medical science that provided us with the knowledge to understand madness differently. It is medical science again that can provide us with knowledge to understand innovation and more particularly – to thinking about the business of beginnings differently.

Neuro scientists are now reaching the conclusion that brain action cannot be considered at least at its outset as a detached process, our brain does not run the way a computer does. Our thought processes are not free of feeling and in fact emotional experience is a necessary accompaniment to the acquisition of knowledge. Our capacities of adaptive behaviour and the constraints of our value systems are physiologically and evolutionarily close.

Some neuro scientists now even believe that our early formulations of thought, as we begin to think about something, starts as thought that is first rich in association but relatively imprecise. So we begin by using our pattern recognition capabilities and we draw upon our memories simultaneously and in an image type form, and also include the issues of immediate relevance to us in our environment. We do this, they believe, in a way that is thought to be akin to a form of metaphoric activity. All this precedes logic, which comes as a subsequent step.

So it is fair to say that our memories and therefore our emotions play more of a role in the way we per-

ceive a situation and formulate a response than was previously thought.

If this is so it is perhaps even more important to recognise that at the beginning we probably cannot avoid putting a resource that we might be going to use into our own contexts, and if this is true then it would be as well to have allowed enough time for integration.

So we need to acknowledge the need for, and the use of, techniques that are associatively rich but relatively imprecise as we start to round up knowledge and assumption of all kinds and to do this well before a formal declaration of intent has to take place. In the work that I and my colleagues do with both individuals and with teams we use a mechanism, which we call Totemics, for crafting the beginning that facilitates people to be able to marshal and align their thoughts well before there is any form of statement or commitment. With us they will have created for themselves a rich map-like resource. They will have employed images and words to richly populate a space with meaning, and with this they can quite easily see patterns, create clusters and chains of thought. These maps are surprisingly long lasting, firstly because they hold a lot of the complexity that is usually held in a tacit form within an organisation. And secondly because people like them – when they look back, doing the totemic will have been an important and interesting exercise.

This way of working is a long way away from a beginning that starts with a bald statement or a set of goals. We particularly endeavor to encourage a senior team and a board to be reflective and to be thinking innovatively about their processes for innovation. Particularly of course at the beginning, since it is here that organisations have least capability.

So to conclude, I would like of course, to see the existence of a better profile for the art and science of beginnings, and my hope is that with greater recognition will come more innovation and a greater community of practitioners.

I would also like to see the design mindset made more explicit, better understood and used in a broader and more collaborative environment,

I am certainly not calling for anything like a new ism – just thoughtful reflection and action.

Peter Drucker, a management writer who I greatly admire, warned management teams many years ago about adopting a tool kit with insufficient understanding as to what the tools were really meant for. And it has been the case that his wise words have gone largely unheeded, we have far too many management isms and models.

I want to end with just a few words from another management thinker that I admire, Mary Parker Follett, was one of the original management thinkers from the 1920s. She had some things to say that, in my opin-

ion are still of relevance today and particularly so in the design industry.

Our problem is to find a way by which the specialist's kind of knowledge and the executive's kind of knowledge can be joined...

...While the executive should give every possible value to the information of the expert, no executive should abdicate thinking because of the expert... Our problem is to find a method by which the opinion of the expert does not coerce and yet enters integrally into the situation...

An advantage of integration over compromise is that only integration really stabilises... But by stabilization I do not mean anything stationary...

Dr Angela Dumas

Management and design consultant, Totemics

KEYNOTE Chris Powell

Practical and inspirational methods to make nations innovative and solve the big challenges of the future

I've been asked here primarily to provide some thoughts on how the creative sector might address the challenges and opportunities of a rapidly changing business environment, and what this may also mean for education providers.

My organisation, the National Endowment for Science, Technology and the Arts has a mission to stimulate innovation. In the creative sector, our interest in innovation does not mean the origination of new creative concepts. Talented creative people, by definition, do this without the need of help from us. In Britain, we're very good at nurturing this talent, not least because of an excellent arts education system that puts practice and experimentation at the heart of teaching. Instead, for NESTA, the innovation challenge is to encourage the exploitation of new business opportunities. We test ways to help the UK's creative sector thrive commercially. We want creative businesses to operate at a scale that keeps Britain culturally and economically important.

For some in arts education, there is resistance to teaching as a means of getting people into the creative sector. Last year NESTA published some longitudinal research into the careers of arts graduates over 5 decades. We found that many arts students themselves are thoroughly disinterested in developing lucrative creative careers and in fact their creative originality is actually derived from a *rejection* of concepts like business, collaborative ways of working and a focus on consumers. We shouldn't be overly worried about this. These types contribute to a vibrant and healthy culture, usually as self-funded artists augmenting their income with work

outside the creative sector. And education's role is to help them maximise their creative potential to develop new and fascinating aesthetic experiences for us all.

But so often, students are attracted by arts and design study because they want to work in the sector. Their expectations at enrolment are that they can develop the skills to be successful in practicing their creativity and earn a living in the creative field they love. So, for these people, developing a strong, sustainable and creative sector is paramount, as is the business of equipping them with the right tools to thrive in a fast-moving and highly innovative environment. Therefore, I want to leave the focus of arts for arts sake aside, and instead outline why the creative industries are so important for the UK and why education needs to meet some big challenges if the creative economy is to remain an economic powerhouse for Britain.

I know that many of you are from outside the UK, and therefore perhaps less interested in my flag-waving. But it is important to understand that one of the reasons for a large and vibrant creative sector here in Britain is that UK government policy, especially over the last 12 years or so, recognises the contribution both culturally and economically that creativity makes to our society. In recent times, this has been echoed in the research of academics such as Richard Florida, who has argued that an active creative sector is a prerequisite for a region's transition to a knowledge economy.

But why, apart from the fact that we have the word "Arts" in our title, does NESTA choose the creative sector as a focus for innovation?

The first reason is that in the UK, and increasingly in countries around the world, the creative industries are big economically. Here, the sector makes up over 6% of our GDP – £57bn – and employs over a million people. Britain has the highest percentage of workers in its creative sector than any other country in the world. We at NESTA believe that creative industries will also be a high growth sector. Unlike, say, the car industry, we expect growth in the creative industries to hit around 4% p.a. over the next five years or so – but, and this is crucial, only if creative businesses can overcome some fundamental challenges.

Disrupting Business Models:

So, what are these challenges? Almost uniformly, they are not about free trade or industrial regulation, nor for creative industries, are they focused on traditional econ-

omies of scale to maximise efficiencies. In fact, the challenges faced by the creative industries are about business model innovation. New technologies, structural changes and the ways that audiences consume creative content means that, increasingly, many 20th century creative business models no longer look fit for purpose.

By way of example:

- The film industry needs rapidly to develop legal distribution models to address piracy. Legislation and "crack-downs" to stop it only seem to appear to many consumers as draconian, perhaps arguably even Orwellian. Film businesses must try to find ways of "cannibalising" piracy – what services can they offer to consumers which are "better than free" so that the movie sector doesn't experience a similar erosion of profits as the music industry? There are some interesting models emerging, with new platforms, such as games consoles offering new routes to market.
- Broadcasters and regional publishers have lost core advertising revenue to Google and others. These traditional mass-media organisations still play an important role in the value chain as producers and aggregators, but how can they make their model pay when advertising spend is moving to new players online? Some funding models, like the BBC licence fee, looks very safe in comparison, but how long will there be political will to keep it going once eyeballs have moved away from the TV screen. This is the reason I think for the BBC's innovation of offering their TV and radio programmes online, on-demand and free to everyone in the UK – the iPlayer.
- The music business, while still in a form of crisis, has recognised that it needs to innovate further to provide new and valuable experiences that audiences are willing to pay for. The rise of the live event, at venues such as the O2, prove that music is not dead as an industry. Increasingly, record companies are experimenting with licensing deals that look to other forms of revenue. Services like Lastfm and Spotify.com offer consumers free access, while monetising their attention through advertising or subscription.
- Digital media businesses need expert support to devise ways to 'monetise' their online services, now that a generation of online users expects it all on-demand and all for free. We are seeing a range of new business models emerge through powerful social network sites, like Facebook. Insert Chris' company.
- In many cases, audiences have simply "moved on", or rather, have "moved online", to new brands that can offer entertainment and knowledge in ways not possible in linear media.

In short, all creative sectors are experiencing a difficult transition from an analogue world, with privileged means of production and distribution, spectrum scarcity and mass-market business models, to a digital world where the only scarcity is that of the consumer's attention and new technologies have put control firmly into the hands of the audience.

We are experiencing these changes now, not in the future. Audiences have progressed to the extent that often they can articulate their demand ahead of the creative producers that once provided them with new experiences. User-led innovation now gives professionally-led production a run for its money in terms of audience attention.

Navigating a successful creative business through this disruption is bad enough for the giants like Disney or Sony. But for many British creative businesses, which are minnows in comparison, firms can be so busy "running to stand still" that they are often unable to develop the capacity to explore and experiment to address these challenges and opportunities. Moreover, UK creative businesses too often focus on creative practice at the expense of, rather than alongside, their business sustainability.

To illustrate this point I want to give you some figures taken from a survey commissioned by NESTA¹ of small creative businesses. The findings suggests that only 35 per cent of businesses have established specific financial goals for the future – and less than two-thirds of these have included the goals in a formal business plan or strategy.

Surprisingly, even one-third of creative businesses with turnovers of more than £1 million have no financial goals. More than half of the creative businesses surveyed do not have any senior managers who have received any training in business strategy; in nearly 90 per cent of these businesses less than half of the senior managers have received any training of this kind. Again, surprisingly, this also applies to creative businesses with turnovers of more than £1 million; on average less than half (44 per cent) of the senior managers in these businesses have received any training in business strategy.

Creative talent by itself is no longer the sole criterion for a long and prosperous career in the creative industries. It must be augmented by business skills to get the product, marketing and customer service right and then to have the capacity to innovate quickly to exploit emerging new opportunities. Innovative business models also require an understanding and a commitment of negotiating new frameworks for rights, unusual partnerships and the ability to mix an awareness of technology with aesthetic sensibilities.

Education's role:

The second of my questions remember, and the reason for this event, is how education might map out and rise to meet the challenges of this serious disruption. Your own challenge over the course of today and beyond, is to acknowledge that these changes are happening, but also to resist trying to pick winning technologies or dominant designs. Instead, I think that your goal is ultimately to ensure that the young people served by academic institutions are equipped with the right transferable skills to develop and exploit their talent into enjoyable, valuable and sustainable careers in the creative sector. I'd like to think that these skills will, in part, be "technology agnostic", and that arts and design education focuses in nurturing an *approach* to both commercial and creative innovation, as well as showing young people how to pick up and work the tools. Many creative industries, such as the games and film industries cite the need for technical skills and we shouldn't lose sight of market demand for these. But, the chances are, that in any case, that often sophisticated technological knowledge of the means of production will already be in hands of your students and that they may be in the position of teaching you a few new tricks!

So far, I've only really mapped out the very challenging context in which the creative industries find themselves in. It's very easy, in fact, to say that it's all changing like never before and that the creative sector needs to innovate their business models, and fast. It's also very easy to say that the challenges are unprecedented and that we should be supporting and nurturing a spirit of innovation rather than propping up dinosaurs. Finally, it's also very easy to say that education needs to keep pace with these changes, but don't worry too much about the technologies, concentrate on augmenting creative practice with transferable skills.

So, I thought that I'd like to try and be a bit more useful than just saying those things, important as they are. I'd like to outline 3 key themes which, despite a lack of clarity about winning technologies or dominant designs, we at NESTA think will be worthwhile ways of working both for creative businesses and the academic institutions that develop talent for them. These themes are derived from the research and programme work that NESTA undertakes across the creative sector and we think that their significance will grow over time.

It's good to recognise that many of the approaches I want to talk about are already happening in arts and design education. All too often though, they are the exception rather than the norm. We should be honest about this and move towards a more rigorous and systematic approach to helping people develop some key ways of working.

I'll give you the headline of each theme, and then expand on them a little.

1. Academic institutions must create or set up work-like environments for their students to enable them to find work after college.

This simple message has behind it a wide range of useful and very practical activities. For example, placement programmes in the creative sector work extremely well, although they remain relatively rare on arts courses at undergraduate level in the UK. NESTA funds a placement programme in the games sector which has been developed and is run by the University of Abertay in Dundee. The name of the programme is "Dare to be Digital". Instead of spending their under-graduate vacation working in MacDonalds or in similar jobs, students on games courses spend 10 weeks working with SME games developers on real-life projects that are pitched to publishers. The "conversion rate" of students on this placement programme into work on graduation is 84%. Compare that to the 17% of UK games graduates who go on to work in the industry and you begin to get a picture of the programme's success. In this case, the University of Abertay has recognised that education does not all have to be directly taught by teaching staff at the university. Instead, it creates a suitable condition for learning industry-relevant skills and the opportunity to work on real-life projects. Abertay is now widely seen as the creative hub for games development in the UK and in the last year or so, Dundee-based games companies have attracted more than \$50m of international investment.

The educational programme that takes the industry-led concept to its ultimate conclusion is Sweden's Hyper-Island. The college is actually situated on a real island that used to be used for keeping prisoners – now it houses undergraduates. The course teaches digital media production, but does so by eschewing any form of traditional teaching and instead gets its students to work collaboratively on real-life projects for corporate clients. The teaching of production skills are demanded by the students only once they understand the brief for each project and then the faculty staff resource this expertise in from other companies. In the 2007 cohort of graduates, 100% of students found jobs in the creative digital media sectors, 80% went to work abroad for high-profile clients and the most successful graduate received 56 job offers before his graduation. Hyper Island is currently exporting this educational model around the world and is also developing a new leadership programme derived from its student-led approach called "Accidental Leadership".

The point here is that education that offers placements, knowledge transfer or just brings real-life projects into the class-room ensures that its syllabus stays relevant, irrespective of the technologies taught.

On the flip-side, those creative businesses that want to cut their recruitment costs, build staff loyalty through

career development and get the freshest, most innovative ideas, often sign-up to student placement programmes. In the UK, I'm heartened that a number of academic institutions, including Ravensbourne, have joined up with the audio/visual sector skills association, Skillset, to launch Media Academies. These courses, like Hyper Island, prioritise industry-led training and collaborative working. As more students chose arts and design courses, I think that this industry-led approach will differentiate courses as being highly attractive.

2. Encourage convergence, collaboration and Inter-disciplinary ways of working

The demand for converged media is already here. There is no doubt that audiences are now consuming their media, services and brands across a variety of different platforms. Ofcom, the regulator of the communications and media sectors in the UK has highlighted that in each subsequent year since 2004 consumers increasingly experience, surf, transact and network over a range of devices. They have limited tolerance of a brand experience that is not available to them whenever, wherever and however they want to consume it.

This throws up 2 key challenges for creative businesses. The first is to understand enough about the available technology to develop creative, original and useful consumer propositions. The second is to fulfil delivery of these services without risking the costs of large numbers of staff and investing in huge overheads?

The answer is an increased focus on collaboration and inter-disciplinary ways of working. Creative businesses have a great head-start in this respect. They are often used to coming together to work collaboratively on specific projects and their size often makes them agile. For this reason, creative businesses are adept at networking and making connections.

Increasingly, creative businesses will find it valuable to build strong networks with people who can help them get their head around the technologies that can offer access to new markets and audiences. Often these people come from other creative sectors, such as the games or digital media industries, where they have been grappling with rapid consumer change for several years. This kind of convergence and collaboration is key, not just to find new revenue models, but also to develop and test the new creative services for tomorrow.

NESTA runs a Film programme, in conjunction with the UK Film Council that seeks to answer some big questions around the digital distribution of independent UK film. Questions like how to deploy marketing effectively through online social networks, or how to develop rights models across a number of differing territories. The big one remains how to capture audience attention in a world of unlimited services. Revolver Films, an innovative film distributor used the programme to test

what would happen if it collapsed the window for one of its films – the horror movie Mum and Dad. Instead of paying for ad space once when the movie came out in the cinemas and then again when the film was released on DVD, Revolver decided to release the movie simultaneously on all platforms – cinema, DVD, VOD and on-demand. It did this so that a limited amount of marketing spend went much further and enabled audiences to choose how they watched the film. Ironically, it was the movie theatres who complained – even trying to threaten Revolver with a boycott if they went ahead with the release. Sometimes the route to innovation throws up challenges from surprising quarters and highlights useful partnerships from unexpected places. The commercial lesson of Revolver's collapsed window experiment? Video on Demand seems to offer the best user experience of easily finding and then viewing a movie in good quality on an HD ready TV, with a payment process which is trusted and accepted. The lesson is to start collaborating with cable companies and games console manufacturers.

NESTA's next steps on from the film pilot are to work with regional screen agencies across the UK to develop stronger links between regional film businesses and digital media companies. I think that there's also a role here for educational institutions to help develop networks across the creative sector which will help you to develop your own converged production expertise.

Unfortunately, many academic institutions are not incentivised to reward inter-disciplinary working, but instead are encouraged by research budgets to develop ever-more siloed post-graduates focused on specialist subjects. It is regrettable that it is still rare to see computer science students working side by side with design students on creative projects – and yet this is the very basis for a successful games or software industry.

One NESTA project that aims to demonstrate that inter-disciplinary thinking can thrive in academic institutions is the initiative called Design London. Design London develops, researches and delivers radical new practices, tools and processes that transform the way businesses innovate. And helps them translate their creativity into commercial success.

The faculty brings together creativity and expertise in design from the Royal College of Art, engineering from Imperial College's Faculty of Engineering and the business of innovation from Imperial College Business School. Design London was established following the Cox Review: *Creativity in Business*, that highlighted the need to stir together the scientific, engineering, business and creative design communities to enhance business and public sector innovation.

Design London has four main activities: creating new teaching programmes, conducting top-level research,

incubating new business ideas and pioneering the next generation of innovation technology.

It is delivering integrated design and business programmes for MBA and Masters of Engineering students at Imperial College, as well as for the MA students at the Royal College of Art.

There are many challenges around intellectual property rights, spin-outs, synchronising courses etc, but the participants in Design London are working in a way that encourages and stimulates innovative product development with commercial routes to market. Products which have been jointly designed, manufactured and now being incubated include Orbel, an ergonomically-designed hand-gel dispenser to fight MRSA, a spray on fabric from an aerosol and Robofold – a manufacturing process that uses robots to directly form sheet metal without the need for cutting.

3. Successful Creative Businesses need Enterprise skills

I mentioned earlier that there is not enough focus on business skills within our creative businesses. In too many cases, the creative practice gets in the way of even relatively basic business competency. The aspiration to grow a creative business can be hampered by an ignorance of the necessary next steps. This lack of awareness is rarely acknowledged by arts and design courses, where the teaching of creative practice so often crowds out enterprise training, or it is not taken seriously enough by the teaching faculty who are usually employed on the basis of their subject expertise.

Too often in the UK, enterprise skills are left until post-graduate courses. The implication is that students of a higher technical quality will make the financial commitment to post-graduate study and that is the appropriate time to teach the most talented creative students entrepreneurial skills. In fact, this results in not enough arts or design graduates perceiving that launching their own business could be a viable career option.

Many might ask what this topic has to do with technology or service innovation in the creative sector. In fact, all innovation is about bringing new ideas to market and if creative businesses have no idea how to identify market potential or how to get access to finance or what the cost/benefits are to adopting new technologies in production or distribution then they remain hampered, even if they are creatively talented.

In conjunction with the Higher Education Academy, NESTA published some research into the issue of enterprise training in higher education in 2007². We found that while arts and design courses often deliver enterprise training, more still needs to be done to consoli-

date these efforts into a coherent framework for delivery that ensures it is explicit, effective and sustainable.

Despite long traditions of practice-based learning and engagement with the creative industries, there remain significant barriers to strengthening entrepreneurship education in art, design and media education. Institutions and departments are inhibited by sector-wide quality assurance, academic management processes and a lack of strategic development, while students still have mixed views on entrepreneurship, especially the popular media stereotypes that focus attention on a very narrow view of entrepreneurship.

Lastly, the most effective entrepreneurship learning is likely to be as a result of collaborative provision where higher education institutions and the creative industries take joint responsibility for the curriculum. Yet the widespread view in the creative industries is that forming collaborations with higher education remains difficult.

Over the past five years, NESTA has experimented with developing creative enterprise training with programmes that encourage creative graduates to launch new businesses. We started off by running relatively expensive programmes that gave generous grant funding and we've ended up with a streamlined programme that teaches graduates creative enterprise skills over 4 days. This latter programme, called Starter 4 Six, has resulted in over 200 new businesses being launched. To date, they are all still trading. Over the last year, we've extended the enterprise support by getting entrepreneurs from previous years to mentor those setting up new ventures. The theory is that actually the best form of business mentoring for start-ups is provided by peers who have recently done it themselves.

One example is Amanda Jones. Amanda decided to use business to change the humanitarian industry and has set up a design company, Red Button Design, which offers products exclusively to the aid and humanitarian sectors.

The company's first product, Reverse Osmosis Sanitation System (ROSS), is a water transport, sanitation and storage device for use in the developing world where there is not yet a sustainable water infrastructure, or where the water supply has been disrupted.

It is taking the sector by storm and already has 20,000 units pre-ordered and prototypes set for field trials in India and Sub-Saharan Africa.

We're currently talking to a number of arts courses in the UK to get them to incorporate the Starter 4 Six model into their syllabus to augment the teaching of creative practice with simple business skills. For example, City University is running a pilot as part of the Skillset Media Academy to incorporate enterprise skills into its syllabus. We're also hoping to develop a programme with the London College of Fashion to help young fash-

ion designers get a better awareness of working to set up businesses directly in collaboration with manufacturers.

Our learning material, including lesson plans, will be freely available to course tutors as a downloadable toolkit from the NESTA website from July, but please see me after if you'd like more information about this or if you'd like to incorporate the programme into your own courses.

Conclusion:

To summarise these 3 themes and how they may contribute to a healthy creative sector, I wanted to end with my own stab at a successful educational scenario for, say 2012. There's no future-gazing around technologies here, merely a mild fantasy around the approach that arts and design courses bring to developing new talent in preparation for a successful creative career.

Here goes:

The newly-appointed University of Bognor Regis has set up a design-course in partnership with a number of local businesses. The primary local partner is the academic publisher Wiley, but other businesses include Lec Refrigeration and the Body Shop Health products company. Students get to work on business projects suggested by the private partner as part of their coursework, with the focus on new product development. For this, the university has teamed up with the marketing undergraduate course at Chichester University and with the business school at Portsmouth. The projects bring together inter-disciplinary teams from each university to understand all aspects of product feasibility from design through to manufacture and product launch. A mock advertising campaign was created by a graphic design student on the course working with an English PhD student. After graduation, 3 of the students who worked well together on a successful project decided to set up a product design consultancy business specialising in rapid prototype development. The Body Shop became their first client.

I know that in some educational establishments, scenario like this is, at least in part, already happening. Our work at NESTA suggests that these approaches do foster the best environment for creative people to produce the best work. Let's try to make these approaches the normal experience for young people who have the aspiration to work in our most exciting, valuable and rewarding sector.

Thanks for listening.

Sir Chris Powell

Chair of NESTA, National Endowment for Science Technology and the Arts

² Creating Entrepreneurship: entrepreneurship education for the creative industries

Sir Christopher Frayling

Speech at Cumulus Gathering in Greenwich

Welcome to the Painted Hall here in Greenwich – which has rightly been called “the most elaborate dining hall in Europe”. The Hall was designed by Christopher Wren, with paintings by James Thornhill. The building took five years to complete, but the paintings took just under 20 years, from 1707 to 1726. So the Hall was closed for the first 20 years of its life, and when it did open, it was thought to be much too grand for its purpose, so it remained empty. The pictures of the ‘Cardinal Virtues’, of ‘Peace and Liberty Triumphant over Tyranny’, of ‘Britannia ruling the waves’, and of the ‘Queen of England surveying all the continents of the world’, were thought to be a bit too grand for a dining-room, and not very good for the digestion, especially when overseas visitors came to dine. There are messages here for Cumulus. The history of this Hall just goes to show:

- A. that thorough briefing of designers in advance is rather important;
- B. that showing off can get in the way of function; and
- C. that where the arts are concerned, nationalism isn’t very helpful – least of all in a global culture which doesn’t recognise boundaries; and
- D. that it is best to use an artist who went to art school and concentrated on his professional practice or business studies lectures; who knows how to estimate, manage his time, and work to a brief. Otherwise, there is likely to be trouble. A picture of James Thornhill is in fact included in the painting behind me – and he has his palm upwards. Apparently, he was never paid. Another thing he should have sorted out in advance.

But James Thornhill didn’t have any formal art education – instead, he learned his trade working side by side with Italian and French painters living in London, and he then travelled to Belgium and Holland and Germany to study architecture. Even in those days, London was a hub of the creative industries. After Thornhill

had made his name – largely with this project – he went on to run a private art academy which included William Hogarth among its star graduates. After he left the academy, Hogarth – like so many of our graduates today – then went around claiming that he was largely self-taught and that he never learned anything at College. And, to make matters worse, he ran off with Thornhill’s daughter, with whom he’d fallen in love while he was a student. James Thornhill wrote that running an art school did have its ups and downs, or words to that effect. And I’m sure the heads of schools and colleges who are here tonight will agree with that!

But James Thornhill was in some ways a man after our own heart – a one-man Cumulus network (in his case, Britain, Italy, France, the Netherlands, Germany), an art educator, someone who wanted to understand the latest innovations in his world, and how to build a career through international contacts. Sadly, James Thornhill went out of fashion in the recession of the 1720s – too grand, too big, too expensive, and frankly not quite as good as his European rivals – and so he decided that a much more stable, and honourable and honest profession than painting would be to become a Member of Parliament, which he did. Hogarth painted him in 1729 as a member of the Planning Committee of the House of Commons. His second home – the huge Thornhill House – was in Dorset, though whether he claimed expenses for it is not recorded.

So, a warm welcome to this Painted Hall, which is I’m sure you will agree a very suitable venue. And welcome to this farewell event of the Cumulus Conference 2009.

I was actually involved in the foundation of Cumulus, nearly 20 years ago in 1990, when Yrjö Sotamaa, the Rector of the University of Art & Design in Helsinki, and Jocelyn Stevens, Rector of the Royal College of Art in London, together thought it would be an excellent idea to create a network of art and design educators – across Europe, in those days – to encourage mobility and the sharing of good ideas, and provide a platform for funding applications to schemes such as Erasmus. There were six organisations involved at that time – from Finland and the UK, plus Denmark, Holland, West Germany and Austria. Over the years, Cumulus has evolved into much more than that: an international association, a network, a sharing of best practice, a benchmarking of standards and skills, a swapping of notes, a platform for research across boundaries, a place to debate the

latest thinking, a dogma-free zone. And from just six institutions growing to this evening’s gathering, which by my count involves some 300 delegates from 97 organisations. From Africa and America and Australia, to Zurich and Zealand, New Zealand, via Europe, Iceland, Japan, Canada and China. All meeting at a time of great global challenges which will have to be confronted in global ways: the main themes of the conference have in fact all been horizontal ones, right across all our cultures: technology, communications, creativity, innovation, thinking across boundaries, the environment, partnership, relationships with business, cultures in the plural rather than culture in the singular, art as an international language that doesn’t recognise borders, and nor should it. Plus, of course, and unavoidably, the global recession.

On the subject of which, a Chinese friend of mine – an economist – gave a prestigious lecture in London a couple of years ago, about the aspects of Britain which were most highly regarded in China. There were two above all, he concluded. One was financial services. The other was the creative industries, design and engineering. At the beginning of this year, he contacted me again and wrote “correction: just one!”.

Which just goes to show that design isn’t at all about the icing on the cake, the first thing to be top-sliced when times get hard. It is, as many commentators have said over the past few months, essential to all our futures. And, as my Chinese friend added, so is art and design education – a sentiment recently echoed on the other side of the world by Michelle Obama when she spoke at the opening night of American Ballet Theatre: “My husband and I”, she said, “believe strongly that arts education is essential for building innovative thinkers who will be the nation’s leaders of tomorrow”. It is a rare and welcome thing for an inhabitant of the White House to be praising arts education.

She was no doubt thinking, as was my Chinese friend, of the sorts of graduate who say “why not?” rather than “why?”. The sorts of graduate who, even when others are in the slough of despond, tend to have a strong belief in the future. Not as any kind of feelgood factor or in an unchallenging way, but they will believe that doing something about it, and making a difference, is a worthwhile thing to attempt – especially trying to humanise and find a sensible way through an extremely complex world of technology; a brandscape. They’ll have their finger on the pulse of contemporary culture, they’ll be flexibly-minded, multi-cultural – they will think of cultures rather than culture – good at setting their own agendas and solving their own intellectual and visual problems, highly motivated and full of attitude, completely at home in the digital universe, excited by an unpredictable world where the goalposts keep shifting and products are made of thin air, in tune with fu-

ture trends and they will indeed have a profound belief in the possibilities of the future. “What’s the point of design?”, the designer and founder of the British arts and crafts William Morris was once asked just after he’d delivered a lecture on ‘The Useful Arts’ in Birmingham. His reply? The point of design “is to give us hope”. Art and design students – in this country anyway – are already five times more likely to be self-employed than any other university graduates – and they are particularly good at constructing worlds around themselves in very entrepreneurial and improvisatory ways. Worlds where products and services seem to be blending together; where in-house has turned into in-system; where there’s no longer a stable idea of function; where design isn’t just something you do to things, it’s something that happens in a cultural and economic context; and where there’s a sense of stimulating industry rather than criticising it or even serving it; and where designers can become strategic thinkers in the world of business. Because, as the last decade has shown us, the creative industries want above all to be stimulated with strong and innovative ideas.

We really need such people, especially now – and the institutions of Cumulus, individually and collectively, are very good indeed at producing them.

I was at a seminar recently at No. 11 Downing Street – where the Chancellor of the Exchequer is based – on the American ‘New Deal’, the Works Progress Administration Artists Project of the mid-1930s, and its possible lessons for the arts and arts education in Britain during a deep recession. There were presentations about how far-sighted President Franklin D. Roosevelt had been, and about the resulting public works created by visual artists – murals, photographic surveys, paintings of social life – at that time. The ensuing discussion focused on the arts as morale-boosters, as statements of confidence, as contributions to national reputations at a time when these reputations had/have been severely dented, as employment and as stimulants of the creative economy – the impact of public investment on private profits. A key area.

And then, the discussion at the seminar turned to public support for the arts and arts education during a recession – and the general view was that support for them was particularly important in difficult times: for all the reasons the ‘New Deal’ was significant in the mid-1930s, but with the difference this time round that the new ‘New Deal’ should be less nationalistic than the American one. More international and more concerned with partnership. One or two people talked about leaky garrets and how art thrives on adversity and how artists can live on next to nothing and how the recession will purge the excesses of the art scene: you always get that sort of talk, from people who never get to meet artists. But the consensus was that the arts and design

should be encouraged to move centre stage at this time – and especially the up-and-coming generation of artists. The biggest legacies of the Works Progress Administration Artists Project of the mid-1930s have names such as Jackson Pollock, Philip Guston, Mark Rothko, Willem de Kooning, Orson Welles and Walker Evans. They were given their start, as professionals, by the WPA. It was well worth being reminded of this.

Thank you all for coming tonight. Thank you especially Robin Baker and his team for hosting this Cumulus Conference 2009 – celebrating in style the move of Ravensbourne College from Chislehurst to the Greenwich Peninsula – will this be your own private dining-room, Robin? – and thank you to all the speakers, to Greenwich Council, the O2, Skillset, London Higher and others for supporting the event.

Christopher Wren, the designer of this building asked that the following motto be set into the centre of the mosaic floor of St Paul's Cathedral, his masterpiece, in the heart of the City of London:

“Si monumentum requiris, circumspice”.

If you seek a monument, just look around you.

Members of Cumulus, if you seek a monument to the first 20 years of this great gathering – and all it stands for – just look around you. The journey to arrive at this point has been not only exciting, it has been worthwhile.

Sir Christopher Frayling Rector
Royal College of Art, London

Thinking about research
& advanced degrees:

Highlights from the CURE survey

Yrjänä Levanto & Sharon Poggenpohl
with Dr. Eric Ngai & Hanna Karkku

In 1995, Uwe Poerksen's German book, *Plastic Words, the tyranny of a modular language*, was translated and published in English. In it he identified words that are both vague and over-used. Words such as 'basic need,' 'communication,' 'identity,' 'solution,' 'planning,' and 'development' were on his list, and I couldn't help but observe that many of the words are favorites for designers. To his list I would now add 'research.'

As the world in which we live and work has become more connected and competition has intensified internationally, research has become a more essential element in design development (oops, there is a plastic word). Research keeps you informed about the state of the art regarding whatever you are working on as designers often are expected to be a bit ahead of ordinary application of ideas and technology. Things change quickly now and they ripple across cultures and continents. Research also helps structure possible answers to unanswered questions through study and its resulting analysis of evidence. There are many ways to do research, but it is not just fooling around – intuitively trying this or that or reflecting on what one has done. Research has structure and develops new knowledge.

I nominate 'research' as a plastic word because it is used so easily and has been stretched and molded to myriad shapes that distort the sense of the word. It is a buzzword in academic design circles. Because it is so current, CURE with Cumulus approval undertook a survey whose goal was to better understand the ways in which design programs were structuring themselves with regard to research and advanced degrees in design as they go hand-in-hand. The hope was that we could learn from each other what were the necessary attributes of a program with research and advanced degrees. The survey reveals the essential infrastructure needed to support research and advanced degrees – this was the goal.

From an academic standpoint, design has been stuck in the rut of undergraduate education – preparation for the first job. First degrees in design date only from around the 1950s; they became more prevalent in the 1970s. The vision of what design might be and how one qualifies to be a designer has stagnated with even master degree work often re-mediating what wasn't sufficiently learned in the first degree.

Architecture is arguably one of the more developed design disciplines. Some years back, during a meeting with people from SOM (Skidmore Owings and Merrill), a large and notable architectural firm in Chicago, a partner brought out a chart of skills and responsibilities for architects within the firm. This chart showed the development of architects from their earliest time with the firm (their first job) and concluded with their roles as partner, covering all the points between. This was a lifecycle approach to being a designer in which challenges changed and personal and professional growth was possible – in a way it covered in a task oriented way what could be learned on the job. This chart was an eye-opening moment for me.

What is a lifecycle in design? Certainly there are options for individuals in design – paths they might choose, whether growth through practice or growth through academic challenges, including research and doctoral degrees. Most disciplines divide into practice and research, but neither of these has one approved program.

Research is not one philosophical or methodological approach – it is varied depending on many factors. Likewise, practice is not one approach either; some designers have as their most important value aesthetics, and they seek out projects that give them free reign for development. They may work intuitively and find clients who appreciate their vision; for them research may be unimportant. Other designers may work on complex projects with a multitude of criteria to fulfill, they may work with collaborators from other disciplines, and clients with schedules, tight budgets, and critical comments on the developing work; here original research or access to research findings may be important. Both are designers, but they work in very different contexts. It is important that as a community we recognize the value of different approaches. Within our education institutions we may focus on one or the other, depending on resources, goals and student capability and interest.

The survey was not without criticism within the CURE group and probably beyond. Questions focused on de-

sign and research rather than art and research. Art history and its research apparatus are well established; design research is not. Art practitioners may create new experience through their work, but they do not create new knowledge, hence the focus on design. The survey had disappointing results in terms of the numbers of participants, only thirty programs responded. Nevertheless we can learn from those who participated. A colleague of mine at Hong Kong Polytechnic University, who as Research Deputy in Design was the right person to answer the survey, said he would not have answered the survey if I had not contacted him personally. It would be interesting to hear reasons from others regarding their lack of participation. There are cultural dimensions to survey participation too. Americans are notoriously active survey respondents – just give them a chance to offer their opinion. Asians may be more reluctant and I have no idea where Europeans fall relative to such participation.

The survey reveals the infrastructural needs for those interested in developing a research capability and advanced degrees in design. The survey takes design research and the generation of advanced degrees seriously. We think you'll find participants' responses interesting. If nothing else, the survey is a kind of road-map to a journey with choices, side trips, decisions, and a main thoroughfare that networks institutional characteristics and goals, faculty interests and capability, with student aspirations. Some may not want to take the journey, and that is fine too.

A couple of recent arguments for research follow; some may find the ideas useful.

Design Integrations, Research and Collaboration.

Forthcoming Summer 2009. Sharon Poggenpohl and Keiichi Sato, editors. Bristol, UK: Intellect Books. *Why Do We Need Doctoral Study in Design?* 2008.

Meredith Davis. *International Journal of Design*, Vol. 2 No. 3, pp. 1–9.

We hope the CURE survey is stimulating for those who are interested in research and advanced degrees in design. For others, it may reinforce their idea that developing such a program is not for them. Because design covers such an expansive scope of work, design programs are seeking to differentiate themselves through developing a point of view that includes appropriate methods and context for work as well as a philosophy of design. Work in design does have a life cycle as mentioned relative to architecture, the CURE survey points out possibilities for developing academic infrastructure to support research and advanced degrees.

Sharon Poggenpohl

Sharon Poggenpohl was a Professor at the School of Design, Hong Kong Polytechnic University, where she coordinated the post-graduate programmes in Design. She designed a new Master of Design offering, Interaction Design, starting in September 2007 and she also coordinated the last IASDR (International Association of Societies of Design Research) conference, Emerging Trends in Design Research, held in Hong Kong in 2007. She co-edited with Keiichi Sato *Design Integrations: Research and Collaboration* (Intellect Books, 2009). Her research interests include new structures for information delivery and use in digital media, focusing on such concerns as interface, interaction, search strategies, and motion – all from a user-centered and perceptual/cognitive point of view. Formerly a faculty member at the Institute of Design, IITD, in Chicago, she ran the Future of Learning Workshop there for many years. A recipient of three teaching awards, she is also concerned with learning strategies in design and beyond. Graduate education in design (master and PhD) has been her focus for over twenty years. In addition to being an active writer, she edits and publishes the interdisciplinary, scholarly journal *Visible Language*.

CURE committee members

Marjolijn Brussaard, Netherlands
Luisa Collina, Italy
Eduardo Corte-Real, Portugal
Meredith Davis, United States
Kun-Pyo Lee, South Korea
Yrjänä Levanto, Finland
Sharon Poggenpohl, Hong Kong

Highlights from the CURE survey

Financial support, %	COUNT	PERCENT
Public money	72	
Private money	28	

Methods to fund research degrees, %	COUNT	PERCENT
Public money	24	
Self-financed	22	
Contract research	19	
Grant money	17	
Private scholarship	17	

Types of research faculty engages in, %	COUNT	PERCENT
Applied	33	
Multi-disciplinary	23	
Basic	21	
Teaching related	20	
Clinical	2	

Employment of completed doctoral students, %	COUNT	PERCENT
Academia, teaching & research	85	
Academia, teaching only	8	
Industry, research only	8	
Academia, research only or industry entrepreneur	0	

Administration and organisation of research Q1–Q14

1. Largest Academic Unit

	COUNT	PERCENT
University	18	62.07
College	1	3.45
Academy	4	13.79
School	6	20.69
Total	29	100.00
Missing	1	

2. Public Money Support

(MEAN 72.40%)	COUNT	PERCENT
0–20%	4	16.00
21–39%	3	12.00
40–59%	0	0.00
60–79%	2	8.00
80–100%	16	64.00
Total	25	100.00
Missing	5	

3. Private Money Support

(MEAN 27.80%)	COUNT	PERCENT
0–20%	12	48.00
21–39%	5	20.00
40–59%	0	0.00
60–79%	2	8.00
80–100%	3	12.00
Total	22	88.00
Missing	8	

4. Have the following

	COUNT *	PERCENT
Graduate College	17	21.25
Research Office	20	25.00
Research Institute	14	17.50
Research Council	14	17.50
Internal Review Board (for research grants/ proposal)	15	18.75
Total	80	100.00

* NO OF RESPONSE

5. Post-graduate Degree

	COUNT *	PERCENT
MA	16	32.65
MS	4	8.16
MFA	4	8.16
Mdes	6	12.24
Mphil	4	8.16
DA	3	6.12
PhD	12	24.49
Total	49	61.25

* NO OF RESPONSE

Q5 OTHERS, PLEASE NAME IT:

Masters of Architecture (1)
MA (1)
DLA (Doctor of Liberal Arts) (1)
Chaire de Recherche (1)
Master in Design, Doctor in Design (1)
MARCH, MURB (1)
Mdes (1)

6. Major graduate study areas of the design student

	COUNT *	PERCENT
Architecture	7	3.14
Animation	10	4.48
Art	10	4.48
Multimedia	16	7.17
Interaction	14	6.28
Visual Communication	17	7.62
Graphic Design	18	8.07
Urban Design/Planning	7	3.14
Industrial Design	20	8.97
Product Design	23	10.31
Design History	8	3.59
Art History	8	3.59
Design Theory	13	5.83
Environmental Design	14	6.28
Interior Design	14	6.28
Design Planning	19	8.52
Design Education	5	2.24
Total	223	100.00

* NO OF RESPONSE

Q6 OTHERS, PLEASE NAME:

Fashion, Textile, Illustration (1)
Textile Design, Silicate Design (1)
Art Education, Media Science (1)
Culture + Context (1)
Urban Design, Landscape Architecture (1)
Furniture design, Applied Art and Design, Textile Art and Design Fashion and Clothing Design (1)

7. Library Reference

	COUNT *	PERCENT
Current and historical books	27	32.53
Scholarly design journals	25	30.12
Database access to Wilson Art Index, Proquest, Jstor, etc	17	20.48
Library research seminars on research techniques	14	16.87
Total	83	100.00

* NO OF RESPONSE

8. Methods of funding of research degrees

	COUNT *	PERCENT
Public Money	14	24.14
Private Scholarships	10	17.24
Grant Money	10	17.24
Contract Research Funds	11	18.97
Self-financed	13	22.41
Total	58	100.00

* NO OF RESPONSE

9. Intake quotas determined by funding level

	COUNT	PERCENT
Yes	8	40.00
No	8	40.00
Partially	4	20.00
Total	20	100.00
Missing	10	

10. Support from parent institution

	COUNT	PERCENT
Yes	26	100.00
No	0	0.00
Total	26	100.00
Missing	4	

11. Mission Statement

	COUNT	PERCENT
Yes	24	88.89
No	3	11.11
Total	27	100.00
Missing	6	

12. Mission statement mention research

	COUNT	PERCENT
Yes	22	88.00
No	3	12.00
Total	25	100.00
Missing	5	

13. Competitive research grants for your/new faculty

	COUNT	PERCENT
Yes	12	44.44
No	15	55.56
Total	27	100.00
Missing	3	

14. Control of budget

	COUNT	PERCENT
Yes	18	66.67
No	9	33.33
Total	27	100.00
Missing	3	

Faculty Q15–Q24**15. Full time design faculty**

	COUNT	PERCENT
1–5	2	7.41
6–10	3	11.11
11–20	8	29.63
21–30	4	14.81
31–40	2	7.41
41–50	2	7.41
51–60	1	3.70
over 60	5	18.52
Total	27	100.00
Missing	3	

16. Design members have DA or PhD

	COUNT	PERCENT
None	2	7.41
1–2	10	37.04
2–5	5	18.52
6–10	4	14.81
11–15	3	11.11
over 15	3	11.11
Total	27	100.00
Missing	3	

17. Specialized training of the faculty members

	COUNT *	PERCENT
Design	26	18.71
Informatics	6	4.32
Multimedia	20	14.39
Computer Science	12	8.63
Engineering	15	10.79
Social Science	10	7.19
Education	11	7.91
Humanities	17	12.23
Art	22	15.83
Total	139	100.00

*NO OF RESPONSE

Q17 OTHERS, PLEASE NAME:

Art Education (10)
Business; Economics; Architecture; Art History (1)
Interior Design, Psychology, Architecture (1)
Architecture (1)

18. Compensation for research activities

	COUNT *	PERCENT
Release time from teaching	22	64.71
Additional money from research grant	8	23.53
Additional contract (summer for example)	4	11.76
Total	34	100.00

*NO OF RESPONSE

19. Engage in research take on research students

	COUNT	PERCENT
Yes	14	51.85
No	6	22.22
Sometimes	7	25.93
Total	27	100.00
Missing	3	

20. Maximum no of research students

	COUNT	PERCENT
1	2	9.52
2	3	14.29
3	4	19.05
4	2	9.52
5	2	9.52
6–10	7	33.33
over 10	1	4.76
Total	21	100.00
Missing	9	

21. Language of instruction

	COUNT	PERCENT
English only	4	15.38
Local Language only	7	26.92
Mixed, Local and English	15	57.69
Mixed, Local and another	0	0.00
Total	26	100.00
Missing	4	

Q21 OTHERS, PLEASE NAME:

Basque, Spanish, English (1)

22. Publish papers in scholarly journals

	COUNT	PERCENT
Yes	23	85.19
No	4	14.81
Total	27	100.00
Missing	3	

23. Present papers at conferences

	COUNT	PERCENT
Yes	25	92.59
No	2	7.41
Total	27	100.00
Missing	3	

24. Translate design research

	COUNT	PERCENT
Yes	24	88.89
No	3	11.11
Total	27	100.00
Missing	3	

Research Activities Q25–Q38**25. Research criteria**

	COUNT	PERCENT
Yes	24	92.31
No	2	7.69
Total	26	100.00
Missing	4	

26. Annual expected research performance

	COUNT	PERCENT
Proposals submitted	2	8.70
Papers published	12	52.17
Conference presentations	5	21.74
No specific expectations	4	17.39
Total	23	100.00
Missing	7	

27. Defined research areas

	COUNT	PERCENT
Yes	23	85.19
No	4	14.81
Total	27	100.00
Missing	3	

28. Research agenda

	COUNT	PERCENT
Yes	17	62.96
No	10	37.04
Total	27	100.00
Missing	3	

29. Engage in multi-disciplinary research

	COUNT	PERCENT
Yes	25	92.59
No	2	7.41
Total	27	100.00
Missing	3	

30. Frequency of Q29

	COUNT	PERCENT
Frequently	17	68.00
Seldom	8	32.00
Total	25	100.00
Missing	5	

31. Teach multidisciplinary courses

	COUNT	PERCENT
Yes	26	96.30
No	1	3.70
Total	27	100.00
Missing	3	

32. Multidisciplinary work across design sub-disciplines or broadly across

	COUNT	PERCENT
Across design sub-disciplines	7	26.92
Across broad array of disciplines	19	73.08
Total	26	100.00
Missing	4	

33. Available of financial resources

	COUNT *	PERCENT
Government	26	46.43
Foundations	17	30.36
Corporations	13	23.21
Total	56	100.00

*NO OF RESPONSE

Q33. OTHERS, PLEASE NAME:

ONGS and Cooperative Associations (1)
EU (1)
University of Leuven (1)
ANR (1)
internal grants (1)
Research institutes (1)

34. Types of research design faculty engaged in

	COUNT *	PERCENT
Basic	17	20.99
Applied	27	33.33
Clinical	2	2.47
Multidisciplinary	19	23.46
Teaching related	16	19.75
Total	81	100.00

*NO OF RESPONSE

35. Responsible for the quality and timelines of research output

	COUNT *	PERCENT
Principle Investigator	14	56.00
Department Head	4	16.00
Research Office	3	12.00
Others	4	16.00
Total	25	100.00

*NO OF RESPONSE

Q35 OTHERS, PLEASE NAME:

Project Leaders in Multidisciplinary Projects (1)
Head of Research (1)
Research Coordinator (1)
Scientific Council (1)
Vice Dean (1)

36. Special research assessment procedures

	COUNT	PERCENT
Yes	12	44.44
No	15	55.56
Total	27	100.00
Missing	3	

37. Teach any research-oriented courses for MPhil or Doctoral students

	COUNT	PERCENT
Yes	18	66.67
No	9	33.33
Total	27	100.00
Missing	3	

38. Course(s) provided for Q37

	COUNT *	PERCENT
Research methodology	17	30.36
Philosophy of design research	13	23.21
Research ethics	6	10.71
Proposal writing	8	14.29
Research writing	12	21.43
Total	56	100.00

*NO OF RESPONSE

Q38 OTHERS, PLEASE NAME:

ID theory, design science, research methods, special courses in other research subjects (ergonomics, rehabilitation technology, risk management etc) (1)
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Students Q39–Q63

	COUNT	PERCENT
Yes	20	74.07
No	7	25.93
Total	27	100.00

40. Design program engage in cross-cultural student exchange

	COUNT	PERCENT
Yes	22	81.48
No	5	18.52
Total	27	100.00

41. No of Professional Masters

	COUNT	PERCENT
0–20	7	33.33
21–40	4	19.05
41–60	3	14.29
61–80	2	9.52
81–100	0	0.00
over 100	5	23.81
Total	21	100.00

42. No of Research Masters

	COUNT	PERCENT
0–20	16	72.73
21–40	1	4.55
41–60	1	4.55
61–80	2	9.09
81–100	1	4.55
over 100	1	4.55
Total	22	100.00

43. No of Research Doctors

	COUNT	PERCENT
0–20	18	78.26
21–40	0	0.00
41–60	2	8.70
61–80	1	4.35
81–100	1	4.35
over 100	1	4.35
Total	23	100.00

41–43 No of post-graduate students enrolled annually

	COUNT *	PERCENT
Professional Master	94	78.93
Research Master	13.6	11.42
Research Doctor	11.5	9.66
Total	119.1	100.00

* NO OF RESPONSE

44. Evidence of doctoral students admitted

	COUNT *	PERCENT
Design portfolio	6	7.14
Scholarly, published papers	7	8.33
Graduate record examination or other standardized test	4	4.76
Statement of research intent	10	11.90
Research proposal	15	17.86
Letter of recommendation	10	11.90
Academic transcripts	12	14.29
Language fluency	9	10.71
Interview	11	13.10
Total	84	100.00

* NO OF RESPONSE

45. Accept non-design students to your post-graduate program

	COUNT	PERCENT
Yes	15	60.00
No	10	40.00
Total	25	100.00

46. Character of PhD or DA degree

	COUNT	PERCENT
Research only	6	40.00
Taught components only	0	0.00
Combination research and taught components	9	60.00
Total	15	100.00

47. Post-doctoral position

	COUNT	PERCENT
Yes	9	40.91
No	13	59.09
Total	22	100.00

48. Residency requirement

	COUNT	PERCENT
Yes	7	30.43
No	16	69.57
Total	23	100.00

49. Duration of the residency requirement

	COUNT	PERCENT
1 year of less	0	0.00
2	2	28.57
3	1	14.29
Continuous residency	4	57.14
Total	7	100.00

50. Maximum allowable number of years for DA or PhD study

	COUNT	PERCENT
less than 3	1	6.25
3	6	37.50
4	5	31.25
5	1	6.25
6	1	6.25
no maximum	2	12.50
Total	16	100.00

Q50 OTHERS, PLEASE NAME:

5 years including 20% teaching (1)
part-time 4, full time 6 (1)

51. Advisors on a doctoral student's committee

	COUNT	PERCENT
1	4	22.22
2	7	38.89
3	5	27.78
4	1	5.56
more than 4	1	5.56
Total	18	100.00

52. Specific role if Q51 is more than 1

	COUNT	PERCENT
Yes	14	87.50
No	2	12.50
Total	16	100.00

53. Roles in relation to the student, if yes Q 52

	COUNT *	PERCENT
Primary	15	39.47
Cross-discipline advisor	3	7.89
Secondary advisor	11	28.95
External advisor	8	21.05
Reader	1	2.63
Total	38	100.00

* NO OF RESPONSE

54. Quality assure of the student research

	COUNT	PERCENT
Primary advisor	14	87.50
Coordinator of doctoral program	2	12.50
Total	16	100.00

55. Outcome of the doctoral degree

	COUNT	PERCENT
Dissertation containing research and outcome evidence	11	68.75
Project and reflection in the form of a thesis	5	31.25
Total	16	100.00

56. Oral defense

	COUNT	PERCENT
Yes	11	68.75
No	5	31.25
Total	16	100.00

57. The character of the oral defense

	COUNT	PERCENT
Public	14	73.68
Private	2	10.53
Combined public and private	3	15.79
Total	19	100.00

58. Examines the research student

	COUNT *	PERCENT
International expert	12	40.00
Local expert	12	40.00
Primary advisor	5	16.67
Interdisciplinary advisor	1	3.33
Total	30	100.00

* NO OF RESPONSE

Q58 OTHERS, PLEASE NAME:

Primary advisor, External advisor and Faculty council (1)

59. Essential requirements for graduation

	COUNT *	PERCENT
Successful oral defense	15	37.50
Dissertation	9	22.50
Thesis	9	22.50
Journal publication	3	7.50
Conference presentation	2	5.00
Exhibition	2	5.00
Total	40	100.00

* NO OF RESPONSE

60. Post-graduate students teach

	COUNT	PERCENT
Yes	16	76.19
No	5	23.81
Total	21	100.00
Missing	9	

61. Follow Q60, what role do they teach

	COUNT *	PERCENT
Teaching assistant	10	29.41
Teach alone but under supervision	9	26.47
Independent teacher	8	23.53
Occasional lecture	7	20.59
Total	34	100.00

* NO OF RESPONSE

62. Offer a class or seminar to prepare post-graduate students for teaching

	COUNT	PERCENT
Yes	7	31.82
No	15	68.18
Total	22	100.00
Missing	8	

63. Employment of completed doctoral students

	COUNT *	PERCENT
Academia, teaching	1	7.69
Academia, research only	0	0.00
Academia, teaching and research	11	84.62
Industry, research only	1	7.69
Industry, entrepreneur	0	0.00
Total	13	100.00

* NO OF RESPONSE

Q63 OTHERS, PLEASE NAME:

In various fields (1)

All the above (1)

In all the mentioned areas (1)

Marjolijn Brussaard

PRE Design Forum in London 2009

History

PRE Design Forum was established after The Reflexive Zone¹ Cumulus conference held in Utrecht 2004. The conference dealt with integration of theory into practice, education and research in the BA curriculum. Subsequent workshops in Lisbon and Copenhagen elaborated on these subjects. The driving forces behind the collaboration were Anke Coumans of the Hogeschool voor de Kunsten (HKU), Maziar Raein of Kunsthøgskolen I Oslo (KHiO), Ulrik Jungersen and Thomas Leerberg of Designskolen Kolding. PRE Design had its first meeting as a working group in Oslo in November 2005 facilitated by Halldor Gislason the then Dean of the Faculty for Design at KHiO. Practice, Research & Education in Design Forum (P.R.E. Design Forum) was chosen for the name of the group.

Statement

The Practice, Research & Education in Design Forum (PRE Design Forum) was formed to investigate the role of research in Design education. The task of teaching in design has shifted from training (the apprenticeship system) to the education (with the introduction of the university BA to PhD system) of students, and this change has influenced the status of design colleges. Due to this, design colleges need to take into full account specifics of design practice and education to find out what kind of research meets their particular needs. Moreover, clarification is needed to discuss the use of the term research in design education terms as contrasted to term research defined by the university system. Therefore, the PRE Design Forum has begun to develop a network, primarily targeting designers, design educators, and design colleges in order to achieve its aims and objectives.

Aims

The aim of the P.R.E. Design Forum is to:

- examine how design educators could and should react to challenges facing design education
- articulate and develop the role of research and theory, while focusing on the particular position of the designer
- investigate what is meant by 'design research' and how it influences the processes and products of design (and by implication design education)
- consider what the role of the 'reflective designer' is within our society
- become an influential voice in the debate about the role of the 'designer as researchers'

Our design research related projects

Design research is already hot on one hand but still rapidly developing on the other. PRE Design Forum is at present working on criteria for methodology, benchmarking design research and design research publications and evaluating design courses. Funding for design research depends on the status of design research in comparison with all other research done at universities granted by university – and good status means more money. On the issue of design methodologies, we want to establish a platform that exchanges criteria is a first step to recognition of design research.

Moreover, there is an especially strong need to get a grip on research results and to measure and benchmark publications on an international level in order to establish design research as believable discipline. There are several lists of design publications, mostly in Anglo-Saxon countries. However there is a need to get a list of magazines that publish design research and

rank them. By our call for criteria we hope to gain a position as a discipline between long recognized publications and journals for other disciplines.

On the field of design education, in most countries there are validation or accreditation systems to monitor the level of education in the universities and other institutions of higher education. In other countries these systems are emerging or looking for international benchmarks. Cumulus has already done some work on this already within the interJartes thematic network (2004–2007) developing qualification framework for design education. In our call for criteria we will work with Cumulus member institutions.

Furthermore, participants in the London meeting agreed to work on a pilot project in their own institutions. The project will use ethnographic methodologies and is on the field of socially responsive design – similarity of the projects allows us to benefit from each others' expertise and compare the results obtained. The kick-off event the project was in Utrecht in November 2009. The results will be introduced in Genk during the workshop day. If you are interested to join this experience please contact: Marjolijn.brussaard@central.hku.nl.

Marjolijn Brussaard Dean
Graduate School of Art & Economics
Utrecht School of the Arts
The Netherlands

Vilnius

8–10 October 2009
Cumulus conference
Design of Change
Vilnius, Lithuania



OPENING SPEECH Audrius Klimas

Nobel Laureate Herbert Simon described the design process as devising courses of action aimed at changing present situations into preferred situations. “Cumulus” seminar “Design of change” in Vilnius (October 9–10, 2009) was held to review the current design situation in the region, to find creative solutions to improve design education and promotion, to share different knowledge in design history, to find connections between design and social development in dramatically changing world.

The host of the seminar – Vilnius Academy of Arts is one organization with two major purposes (education and research), three levels of education, in four cities, with five major disciplines (fine arts, craft, design, restoration and humanities), and with 75 study programs, 35 programs at BA level and 40 MA programs. A sharper design profile is needed in order to communicate the benefits of cooperation to local, national, and international industries and businesses. That is why the seminar was so important for us.

Speakers from Lithuania, Latvia, Estonia Finland, Poland and Great Britain enlightened the state of design policies in different countries and the influence of politics to design and social needs. It was really great possibility to compare different social and historical condi-

tions – totalitarianism, socialism and capitalism and their influence to development of design.

The problem of “small” design in global world and the ways how to promote Lithuanian design, how to become visible and known was stressed in Egle Opeikiene (Lithuania) and Agnese Miltina (Latvia) speeches. Kart Summatavet (Estonia) discussed the design research programs in Estonia during soviet period and today. Michal Stefanovsky enlightened current situation of design in Poland.

The honorable title of “Vilnius – European capital of Culture 2009” presented great possibilities to attract important cultural institutions to become a partners of cultural life of Vilnius. The exposition of “Cold war modern” from Victoria & Albert Museum (London) and presentation of Jane Pavitt, curator of the exhibition was the climax of seminar program.

The presence of international community of educators, researchers, designers and students in Vilnius provided great opportunities to establish strong network between schools, teachers and students. It fostered better understanding of local mentality and global thinking.

Audrius Klimas Professor,
Vilnius Academy of Arts

OPENING SPEECH Marjolijn Brussaard

Cumulus Conference in Vilnius

First I would like to thank the Vilnius Academy of Arts for their kind invitation to this conference.

Yesterday I got the opportunity to visit the buildings of the academy with a colleague of Poland and Italy. You kindly showed us around starting with the eldest building, the building we are in now. A building that breathes history and calm when you walk through the wide corridors. This used to be an old monastery building around two country yards. This enables one to walk around the inner garden. You can actually walk in circles if you'd like.

The second building was the design building. Designed by architects of the academy it breathes a whole other atmosphere. Less history, carefully designed 30 years ago in a period when there was room to carefully give room for new ideas. A very gloomy and quite dark building, designed into every detail.

The newest building is right across the street; it used to be an old printing house and will now be part of the Academy too. The paint is still wet and there are wide empty rooms, halls and corridors waiting to be filled with new ideas and inspiration. In a way this conference is perfectly timed. We'll hear from a wide range of speakers who will shed light on how design did play or could play a role in change. In this area of transition where everything seems to change, the politics, the economy and culture we need to work together to find a new equilibrium for the future.

In Chinese the character for opportunity and crisis are the same. It is in a way the other side of the same coin if you like. So you could translate the present time

of crisis as a transition phase, an opportunity to influence your future and the future of others. Rethinking what designers can do is very valuable at any time but especially now that the economic system is failing to uphold living standards.

The new generation of students, we in the Netherlands call the Einstein generation, has their role cut out for them. The Einstein generation will focus on their passions rather than be bothered by trivial details. They learn in different ways, from each other and they will learn more by getting the responsibility for their own learning. Because internet, email, Google, Hyves, Facebook and mobile phones, connects them to the world preferably all at the same time, these students can and will verify all information and statements.

They are involved in all kind of networks: network communities, social networks, and communities. This generation has a clear eye for their own qualities and the qualities of others and will have no scruples to use them. They will ask the hard questions, discuss fiercely and will have strong arguments on the table in any discussion. So be sure that this generation will design change and not only as professional designers.

The network of communities that students participate in are in line with the development the Cumulus organisation is in. Over the last 20 years we developed from a co-operation between 5 institutes to a network of nearly 150 institutes all over the world. Yet you still feel welcome and connected, like being among friends. By giving the opportunity to participate and start networking communities on specialized subjects Cumulus is a

real networking organisation in the managerial sense of the word. There are networks (we call them working groups on subjects like exchanging students, research, education etc.) The board just enables opportunities and will leave full responsibility to the members.

This conference is a good example of such a networking opportunity. Speakers with different backgrounds will share their experience and expertise. We will hear a marketer, a curator, a museum director, a researcher, the manager of a centre of culture and creative industry education and the head of an association for industrial designers. Coming from Baltic countries and their neighbours they will sketch history and future issues in the context of this region in design.

Like in other institutes I visited this Academy will host a centre for design as well. Together with the initiative of 'Contraforma' this will be, when in close cooperation, a good opportunity to start a creative partnership. As you know a creative partnership is between education, industry, policy makers and the community or region. The pallet of speakers can be seen as a creative partnership as soon as we will have the opportunity to discuss issues at hand. There will be plenty of time after the speakers, this evening or tomorrow. I'm sure the first outline of new networks or creative partnerships will be born here.

Thank you so much Vilnius Academy of Arts for this opportunity.

Marjolijn Brussaard Dean
Vice-President of Cumulus

Kärt Summatavet

The role of research in Estonian higher education in art and design, 1945–1990

Abstract: the paper introduces a so-called blank spot in academic research of Estonian art education in late 20th century, the compulsory academic and developmental work of Estonian higher education in art and design in 1945–1990.

The Kyoto Design Declaration and new trends in higher art and design education have in recent years significantly increased the awareness of the importance of interdisciplinary academic research. Higher education in art and design has taken significant steps towards a tertiary education, an irreversible and unavoidable process. Many art and design universities that have joined the Cumulus network have created PhD curricula and accordingly have increased their cooperation with various universities, an example of this kind of challenge is the idea of founding Aalto University in Helsinki and putting it into practice. The importance of research has gained prominence amid the creation of high-quality PhD studies which enable creative professionals to have a say in innovation and development research of various countries. Academic research enables universities to participate in a wider discussion related to innovation and sustainability, where creativity and product development issues have particular relevance and urgency.

The PhD level studies of art and design has been a controversial issue in various EU universities. On one hand, it is strongly argued that the PhD studies of an art professional should focus on creative aims foremost and research should be working *through art* and *for art*. On the other hand, we desire to increase the sustainability of PhD studies and research by tying it to the best practices and innovative developments of the academic sphere which makes it possible to have a say in contemporary multi-voiced cultural and economic innovation.

However, one of the most important issues of the set of problems linked with the PhD studies in art and design is related to the quality of research and the devel-

opment of the methodology which endorses research in the field of art. Artists and designers embarking on PhD studies bear a great responsibility in posing questions important in their field of research and achieving results that fulfill the requirements of contemporary academic research. The question arises whether we need PhD studies for a private development of one's personal skills and capabilities or do we wish to offer the competences of our field to other fields of research for which theoretical professionals lack the necessary knowledge, experience and skills? Have we created a new opportunity for dialogue which allows us to move towards our future aims together? How do we learn to speak in the academic and business world so alien to artists in a way which would lead us to being treated as equal co-operation partners? These and many other important questions are facing every university offering PhD programmes.

As in recent years a consensus has been reached that PhD studies in art and design require a fine balance between research and creative projects, I would like to introduce a so-called blank spot in academic research of Estonian art education in late 20th century. I was moved to delve into this subject in 2007 at the international conference *Art and Artistic Research Riga 2007* at the Art Academy of Latvia in Riga. Art historian Eva Lapinska gave a presentation titled *Academic Researches of Teaching Staff of Latvian State Academy of Art within Context of their Creation, 1940–1960*. She reminded that research was an integral part of teaching methods and academic hierarchic system, created in the mould of the USSR Academy of Art, and requiring creative professors to produce academic works. Lapinska's research outlined important facts from the research of artists conducted in Latvia during the period of the Soviet occupation, and how its role in the system of higher education went through a change following the collapse of USSR.

The presentation brought out the significant fact that during that period in addition to their teaching duties, all academic employees were obligated to engage in research. I promised Eva that I will also have a look at the academic reports held at the archives of the Estonian Academy of Arts (EAA) that were annually presented to Moscow from 1945–1990. Compulsory research obligation of art educators was forced on them by Moscow, no employee, artist or theoretician was exempted from academic research. Every employee was designated an annual research plan which was part of his or her personal academic five year plan. The time every employee

spent on academic research was meticulously accounted for and manuscripts had to be finished on time. The data on everyone was reported to Moscow; those who fulfilled their plan as well as those who failed to keep up with their plans and tasks. Based on the annual plans and five year plans of employees, the university reported to Moscow on the success of their annual work.

The following research papers of professors, associate professors and teachers are currently held at the library of the Estonian Academy of Arts:

- Fine Arts – 47 in Estonian, 6 in Russian
- Architecture – 27 in Estonian, 5 in Russian
- Art History – 9 in Estonian, 4 in Russian
- Design, Applied Arts – 49 in Estonian, 9 in Russian
- Teaching-methodical research – 99 in Estonian, 11 in Russian

A great number of these manuscripts have been written on Estonian art, architecture, folk art and cultural heritage, there is also a number of historical abstracts, surveys, reports of archeological expeditions, about art and industrial design.

On one hand this enforced obligation created an impossible situation for the creative professional who, in addition to teaching students and his or her creative work also constantly had to engage in writing papers and manuscripts. Professors who were also artists were in a tight spot and many of them struggled with written research which leads us to assume the obligations were often met only formally and did not involve a great deal of concentration. On the other hand this kind of research created a very important precedent in Estonian higher education in art because it transpired that many prominent art professors were already born thinkers and very competent researchers. The contribution of these professionals to the intellectual development of our art culture relied on research; many of them authored excellent monographs, textbooks, academic articles, and books. Compulsory research forced them to express their ideas and aims in written form and numerous manuscripts have been published and given book form.

Taking a closer look at the aforementioned reports, it transpires that the predecessor of the Estonian Academy of Arts which was founded in 1914 and which closed down due to the war, was reopened at the end of the war during the Soviet occupation in Tallinn on December 1, 1944 under the name the Institute of Applied Arts. The EAA archives still hold the first report of study programmes from 1944/45 which already outlines research in four faculties: Form, Colour, Book, and Space. [1] In 1946 on Moscow's orders, a more thorough report of research in 1945 was completed for the first time. It was in Russian and was sent to Moscow as a report on the work of eleven departments and faculties. The report indicates that already in 1945 the university completed studies on the following subjects: research and theory (eight); teaching-methodical research (two); study

materials (one); creative work (485, of which 135 were state commissions and 350 free creative work).

On October 23 1946 the Decree of the Ministry of Higher Education USSR No 585 (Form 1) was issued in Moscow. This document made it compulsory for every institution of higher education at university level to engage in research in addition to pedagogical work. Universities, including the Institute of Arts was obligated by this decree to put together a five year scientific research plan which described in detail the individual research plan of all professors and teachers. The decree obligated art universities to conduct scientific work of research and experimentation.

We can read from the report sent to Moscow that in 1946 the following research papers were completed: joint research in sciences or technology (7), research in theory or experimental research (15), dissertations: doctoral thesis (5), candidate's dissertation (post-doctoral 6), scientific papers (research plan 0/unexpected outcome 19), artwork (research plan 54/unexpected outcome 534), manuals, study materials, monographs (research plan 55/unexpected outcome 1), teaching-methodical research (research plan 3/unexpected outcome 2). The plan was fulfilled 125 per cent, and the commissions 100 per cent. [2]

The 1946 report demonstrates that already then the Academy's director Adamson-Eric had repeatedly discussed with the the Committee of Arts of USSR and the Ministry of Higher Education of USSR the establishment of post-graduate studies in Tallinn (the only higher education institution of arts), but without success. Moscow never gave permission to the only art university in Estonia to open post-graduate studies, however, more enterprising artists set about extending their education in the post-graduate programme of the Estonian Academy of Sciences. Until the end of the Soviet occupation it was possible for an artist to complete his or her candidate dissertation only at the Moscow Industrial Art High School (former Stroganovskoje).

Taking a closer look at the research obligations of professors and associate professors we can see that in time the proportion of theoretical research decreased and creative work, state commissions and exhibitions were also defined as scientific research. At the same time the requirements of personal research became quite strict. Material resources were also rather lacking. [3] Nevertheless the report includes a thorough overview of the research plans that have been completed: research in theory and practice (including three experiments, ten manuals and monographs, seven study materials, one teaching-methodical research, and two dissertations and doctoral thesis). [4] In 1948 the professionals-practicians have mainly focused on the subjects of art history, folk art, and the theoretical aspects of the history of a particular subject. Such a choice of a subject was a fairly neutral option in newly-occupied Estonia

and enabled artists to avoid dealing with political and ideological subjects.

The 1954 report outlines an especially strict set of rules concerning the volume of creative and scientific work of each employee. [5] The report shows how many hours of academic research each member of the academic staff had completed in the space of a year and how many hours had been spent on creative work. There is a chart and table on each member of the staff, detailing their annual academic research and creative work. There is a list of people with overdue tasks and a set of strict new rules for academic working hours. In those days, individual creative work was permitted in the work plan only on the condition that it will not interfere with the completion of planned academic research work. Most of the research was geared towards teaching-methodical research. According to the report, 63 persons fulfilled their research plan, and 15 persons failed to do so (out of which five persons stated medical reasons and 10 other circumstances).

On September 15 1956 the Ministry of Higher Education of USSR in Moscow issued an instructive letter which allowed research work to include scientific-methodological work, as well as creative or interpretational work. Following this decision it was easier for professors to partly meet their research requirements with creative work. The 1971 report to Moscow, for example, states that the research obligations required fifty per cent of research and fifty per cent of artistic work (published) according to individual plans. [6]

During those years, in addition to subjects related to art theory and the history of various art forms, the study of various technologies, product development and patented inventions also gained importance. In addition to issues of art artists also engaged in wider research and development and their cooperation with scientists from outside the field of art and design and industry grew.

It turns out that many talented artists and art pedagogues were also remarkably competent researchers and writers. Many manuscripts constituted a basis for later publications. In the period 1945–1990 prominent artists authored many published monographs, peer-reviewed articles, and other publications for various publishing houses. The Student Research Association (ÜTÜ) also began operating and constantly growing: in 1968 there were 68 members (total 428), in 1969 86 members (total 440), and in 1970 122 members (total 473). Annual academic conferences for students were held, as well as state-wide ÜTÜ conferences, and autumn and spring schools, where all Estonian universities of various specialties – science, technology, theatre, music, art – shared their experiences. In 1984–1987, as a ÜTÜ board member of the EAA, I also took part in those academic events and this communication between the students from various universities specializing in science and art resulted in significant advances in inter-field research.

During this period the number of professors with PhD degrees also increased and, for example, according to the 1984 report the institute employed one Doctor of Sciences and twenty-two Candidates (PhD). In the course of the year, the following works were completed: two finished Candidate theses, one finished doctoral thesis, and two unfinished doctoral theses. [7] In conclusion it could be argued that the obligatory research work conducted by artists during the Soviet period boosted the synergy between theoretical, historical, methodological, and creative work. As a result of their academic research, artists found new inspiration, competence, and professional skills which stimulated the development of the discourse and the institution. Providing the practitioners with an opportunity to make their own voices heard was another important role of research work.

Academic research in the field of art and design makes it possible to unite research and experimentation with art practice, to create patents and usability models; innovative product development bolsters the development of product design and cooperation between different fields. It is probably thanks to the long experience in research in art and design in Estonia, that there has been no bewilderment or angry discussion over how and why the aims of art should be connected to research. Existing problems have mostly arisen outside the field of art and design. However, apart from the tragic events following the Second World War, it is useful to take compulsory research work as a good example of uniting interdisciplinary research in the field of art and design with other branches of science. It is worth remembering the unique characteristics of the higher education in art in the Baltic States and to study them when planning future activities.

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- For example: 1) the need for a photolaboratory; 2) only one typewriter which creates long queues for printing the scientific research of professors (during the Soviet period, all typewriters had been checked by the authorities and were registered in the political structures because it was feared that typewriters may be used for agitation against the occupying powers).
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- 1985 *Eesti NSV Riikliku Kunstiinstituudi 1984. a. teaduslik-uurimistöö aruanne.*

Juha Järvinen

Design Policies vs. Political Design:

Case Industrial Design in the former East Germany

In this working paper, I briefly examine the nature, ideological values, and environment of industrial design in the GDR. In order to deal with this complex subject I have simplified the course of events by grouping them into six periods in time, which I claim, indicated a pivotal point for East German design and designers.

1949–1951

Officially, East Germany was the result of peasants and workers revolution, but in practise it was Stalin's creation. In the aftermath of the Second World War, the border of USSR occupation zone was facing the western part of Germany, and soon a new state constituted on June, 1949. To reduce the risk of a direct military conflict on the European border of Soviet Union, Stalin wanted a protective zone; the state of GDR was constituted on October 7, 1949. Wilhelm Pieck was flown from Moscow (where he had lived as political exile during the war) to occupy the position as the head of state.

The post-war economical situation in the Soviet zone was poor. Rapidly deteriorating political relations between the Western allies and Soviet Union resulted in increasing support of the West German economy by the U.S. and its allies, whereas the newborn state of GDR received very little from the Soviets. On the contrary: the Soviet forces dismantled ca. 3,500 factories¹ from the territory they occupied and transported these to their homeland. Hence, the majority of GDR industry had to be based on pre-war establishments and what production plants were left intact. The motor vehicle industry is a good example of the situation: before the Zwickau P70 saloon, the ancestor of the famous Trabant, was designed in 1956, East German motorcars were produced in factories left behind by their western owners using the same tooling. For example, cars previously known as BMW became EMW² while Auto Union (today Audi) became IFA³. Models were same while in the beginning,

only badges and embellishments were replaced with more suitable ones.

The first "real" industrial product, however, was the Optima typewriter, produced in Nazi Germany by Olympia factories and in 1946 face-lifted by one of the first East German designers, Horst Michel, because the original design was seen as a reminder of "fascist bureaucracy"⁴. Optima is an interesting design case, as it raises a question: why it was seen important to produce this complex device, virtually amidst ruins? And while most immediate post-war products were fundamental household items modified from war-time military equipment, such as milk cans and saucepans made out of gas mask cases? It can be argued, that typewriters were tools of data processing, used in writing official documents, arresting orders, surveillance reports, everything the extensive political dictatorship system would need to retain control. In that sense, the priority to produce typewriters first is a single but powerful example of the sinister nature on the East German societal system, then under development in the cabinets of Kreml.

On the other hand, the East German industrial design had interesting possibilities. It had its roots deep in the exceptionally rich German cultural and industrial heritage, i.e. Deutsche Werkbund and the Bauhaus and the development of the twenties and thirties. Here, Bauhaus is noteworthy for the fact that it enhanced the new rational design thinking. After the closing of Bauhaus, rationalism still remained very influential to all German industrial design. In GDR, these possibilities were available, but soon overshadowed by ideological discrepancies and bureaucratic rigidity. From the beginning of 1949 until the end of the GDR in 1990 the government of GDR steered the designers, placing sometimes strict guidelines to define their work; or identifying what was correct in the light of official thinking. For this purpose various organisations were established. The first was IfIG⁵ the Institute for Industrial Design (1951–52), a lightweight organisation merely inspecting the artistic values in the manufacture of e.g. wallpapers or toys, while IfaK⁶, the Institute for Applied Arts (1952–1972) and DAMW⁷ The German (GDR) bureau of measuring and Inspection of Goods (1954–1973) were "heavily" controlling organisations. But most influential of all was AIF (Amt für industrielle Formgestaltung), the Office of Industrial Design, which 1972–1990). The original mission of AIF was the continuing improvement of design and designers in the GDR, design education in Polytech-

tics and in vocational schools and design promotion. However, as AIF was organised directly under SED⁸ it was also closely connected with the MfS⁹. This resulted in bureaucratic approach: professional Marxist-Leninist economy theoreticians, party cadre people and former employees of the Ministry of Security were preferred in decision-making, instead of designers. For example, all designers had to sign a contract stating they or people near them do not have any connections to non-socialist states¹⁰. To ensure control, free-lance entrepreneurship and establishing private enterprises was not encouraged, but was made deliberately difficult¹¹. Moreover, AIF turned out a vast amount of regulations while companies were often unable to comply with these, but had to disobey the rules to produce badly needed consumer products as a stop-gap measure.

1951

The next watershed was the year 1951. The political climate developed a chill that preceded the Cold War. In the wake of Moscow and Stalin, the SED tried to convince its citizens that their new society was the outpost in the fight against western decadence and consumerism, something that was threatening to destroy the newborn socialist state. Above all, formalism¹² was seen as a major threat, as "volksfremde und volksfeindliche Strömung."

After much discussion during the Third Party conference in July, 1950, the SED proclaimed:

"The fight against formalism, [...] is a fight for progressive German Culture (Fortschrittliche Deutsche Kultur)"¹³.

This incident, that would prove fateful to the official conception of the meaning of design in the GDR, originated from the writings of Stalin. Stalin wrote in his essay "Marxism and the National Question" (1913), that

"A nation is a historically constituted, stable community of people, formed on the basis of a common language, territory, economic life, and psychological make-up manifested in a common culture. It goes without saying that a nation, like every historical phenomenon, is subject to the law of change, has its history, its beginning and end. [...] It must be emphasized that none of the above characteristics taken separately is sufficient to define a nation. More than that, it is sufficient for a *single one of these characteristics to be lacking and the nation ceases to be a nation.*" (Italics: JJ)¹⁴

Thus, resorting to the old German cultural heritage and reinforcing it was seen as best fit to Stalin's vision of how the nation should be protected against dangerous

western influences, such as commercial (design) formalism. As it would have been difficult for the SED to convince anyone that there was a cultural heritage in a less than two-year old society, (later, this was written into the East German constitution) the GDR had to "reverse" to the pre-third Reich German cultural heritage. Thenceforth, designers concentrated on "New German Style" (Ein Neuer Deutscher Stil). This merely meant recycling rustic style designs dating back to 19th or even 17th century Germany.

While the SED and the Ministry of Culture, the parties responsible for measures concerning the use of design highlighted the fight against formalism, and tried to control designers' work, economic realities gave designers less possibilities and initially steered their activities. During the late 1950's, East German design was stylistically influenced by western products. Meanwhile, as functionalist design fluctuations were seen virulent, various designs actually reflected these ideals. The idea of national heritage in design was quietly abandoned after Stalin died in 1953.

1958

All through the 1950's the East German industry – and designers struggled to overcome the ever-present shortage of consumer products. In 1958 a new programme called the Chemistry Programme (die Chemieprogramm) was initiated. Among other synthetic production, the programme also resulted in a surge of plastic consumer goods. As a result, the market was filled with household articles made of plastics¹⁵. Simultaneously, in order to prove the ideological supremacy of the system to East Germans, the government of GDR started a seemingly absurd living standard competition with West Germany. This did not convince many, and The East German population became increasingly dissatisfied with their government. Over one and a half million East Germans voted with their feet and fled before the Berlin Wall was erected.

1963

High hopes were placed on plastics. Synthetic materials were seen as panacea, curing shortages of everyday articles while they were also powerful symbols of GDR's rapid technological progress. The belief in technology's triumph was also in the background when 1963 the so-called NÖSPL¹⁶, the New Economic Plan, was initiated by the secretary-general of the SED, Walter Ulbricht. NÖSPL was an ambitious plan highlighting rational design solutions and extensive use of industrial design in building new successful socialist export economy boldly based on cybernetics, early robotics, automation, and other advanced technologies. While a basically sound plan, ensuring e.g. factories more independence in decision-making, Ulbricht's decision also changed the consumer

goods industry's production focus into the production of investment goods, in the hope of achieving rapid export growth and technological advantage. After eight years, it was clear the plan had failed. Blinkered vision for the development of heavy industry had impaired design and production of consumer goods and meant that East Germans had still wait for their orders for cars, telephones, washing machines, radios or TV sets to be filled.¹⁷

Despite the problems NÖSPL created, it also steered East German design towards the direction of rational, system-based thinking. "Modularity" and "standardisation" were fashionable concepts, while "gray, rectangular and stackable," was the war-cry of many. Hence, despite the ban of functionalism, much of these design results were functionalist in nature.

1963–1974

During the mid-nineteen-sixties while tumultuous political activity shook Western Europe, East Germany was seemingly cocooned from all outside disorder. Politicising was official business in East Germany. Hence, for example, the series of events resulting into the closing

of the West German Ulm School¹⁸ were monitored by East Berlin design officials who then formed conclusions about the political aims and ideological orientation of the Ulm School. Whether the East Berlin reaction was plainly by virtue of one's office or from genuine political solidarity, would need additional research. In practise, however, it can be claimed that the closing of the Ulm School considerably influenced the future of East German design, even after the fall of HfG Ulm another eight years passed before the heritage of Bauhaus and functionalism were reconsidered belonging to the cultural and design "heritage" of East Germany. It is highly possible, that the explanation lies in the constitution of GDR, revised in 1974. In the constitution, the GDR was a new state, without historical ties to Germany, Deutschland, which was explained as belonging to the past, the geographical area now permanently divided into two separate states, the GDR and West Germany. GDR was a socialistic German state (ein sozialistischer Staat der Arbeitern und Bauern). Consequently, the GDR had also its own culture.¹⁹ This also allowed the officials in culture and design to reassess Bauhaus and functionalism as merely external historical phenomena, which had no ties to the "real" culture of GDR. Conse-



Fig. 1: Omega BS1064 Vacuum cleaner (1956). Designer: Hans Merz and work collective

Fig. 2: Hairdryer LD7 (1964). Designer: Rudi Högner

Fig. 3: Wartburg 353 (1966). Designers: Clauss Dietel, Hans Fleischer

Fig. 4: Toaster E1002 (1969) Designer unknown

Fig. 5: Mixer Komet RG5 (1967). Designer: Christa Petroff

quently, this enabled the recognition of certain values of functionalism in design; values that could be interpreted as anti-bourgeois in nature.²⁰ This change of the ideological climate is documented in both the scarce East German design literature, but especially well in the *Form+Zweck* magazine. In the late seventies, numerous articles about the historical extents of Bauhaus and functionalism were published. Many are written from clearly historical perspective, but it is obvious that the point of view in all is to ascertain the anti-capitalist nature of functionalism and the Bauhaus.²¹

The suited East German design ideology well, as the citizen was supposed to find aesthetical pleasure from the life and services the communist society was offering. Ornaments, trim and decorations in industrial consumer products were kept in minimum as these were seen as signs of “western consumption terror”. Various products based on these austere design ideals emerged during the 1960’s into the meagre consumer markets in the GDR. Almost all new products were justified because of their functional details. I.e. a new type of vacuum cleaner was introduced because it incorporated new type of nozzles or a flat-iron because a new handle eased its operation. During the 1960’s and in the early 1970’s even the use of colours without function was questionable.

The shapes, designs and technology these objects incorporate not only reflect the systematisation or hyper-rationalism of their time, but also socialistic conception of aesthetics; how their design was intended in delivering an educational and/or ideological message, that aimed to entertain the illusion of the superiority of the communist regime that does not want to deceive its citizens with flashy and superficial, disposable products. Furthermore, these designs delivered the message of the power that has the supremacy over its individuals.

1974–1989

The late nineteen-seventies and early eighties brought the “ideologically right-or-wrong-design”-debate to an end. The time was ripe for unified design (Komplex Gestaltung). During the 1970’s design in East Germany was officially seen as active part in the complex societal processes (komplex[en] Gesellschaftig[en] Prozeß) [i.e. culture]. This also meant designers were, among other instances, assigned the task of increasing the material and cultural standards of living.²² It was also ideologically correct to think that successful design can be based on various design theories.

However, many official plans were too ambitious. This is especially visible in the design magazine *Form+Zweck*, on its 1970’s and 1980’s issues, which are filled with articles discussing “scientific” design theories and depicting projects that are mainly design concepts. The photographs are of cardboard mock-ups and scale mod-

els²³. What the designers created, was often innovative, but the existing industry and planned economy failed to cope.²⁴ Perhaps the designers thought that although it was often impossible to implement their designs, it surely was worthwhile to create new ones. In any case, their survival depended on their creativity.

Conclusion

It would be wrong to underestimate the skills and creative competencies of the East German designers. But, as shown above, the “design laboratory” of East Germany was haunted by too many factors to be handled by the modest operational conditions the designers had. Designers had to cope with shortages in resources and production. Inflexible production facilities and their rigid management, not to mention ideological contradictions, suffocated the principally excellent possibilities the designers had had. This finally resulted in the relatively low product quality many GDR designs had. However, as innovative and creative persons East German designers were not inferior to their western colleagues. Quite contrary, I would suggest that had the system been even slightly different than it was, East German design could have been more than a match for its western counterpart.

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Endnotes

- 1 For this, see, for example Wentzel, Siegfried. 2006. Was war die DDR wert? Und wo ist diese Wert Geblieben? Versuch einer Abschlussbilanz. Berlin: Das Neue Berlin Verlagsgesellschaft, pp. 40–41
- 2 EMW: Eisenacher Motorenwerke (instead of BMW’s Bayerische Motorenwerke)
- 3 IFA: Die Industrieverband Fahrzeugbau (the vehicle industry pool)
- 4 While this sounds rather pompous, Olympia typewriters were during the war widely used by e.g. Wehrmacht and Gestapo
- 5 IfIG: Institut für Industrielle Gestaltung
- 6 IfaK: Institut für angewandte Kunst
- 7 Deutsches Amt für Messwesen und Warenprüfung
- 8 SED: Sozialistische Arbeitspartei Deutschlands; The Socialist Workers Party of [East] Germany
- 9 MfS: Ministerium für Sicherheit; Ministry of Security, commonly known as Stasi
- 10 For this, see e.g. Höhne, Günther. 2001. Penti, Erika und Bebo Sher. Berlin: Schwarzkopf & Schwarzkopf Verlag.
- 11 See Wolle, Stefan 2001. Die Heile Welt der Diktatur: Alltag und Herrschaft in der DDR 1971–1989. München: Ullstein/Econ Verlag, pp. 322–324. This was in fact a large-scale collectivization in East German economy. Private ventures were forced to use uniform pricing which made competition impossible. After 1972, only 2.1 per cent of all East Ger-

man workforces were employed in private companies.

- 12 Lexikon der Kunst (1968) describes formalism as follows: “Formalismus, [ist] die Isolierung und alleinige Wertschätzung der Bemühungen um die formale Seite der Kunstwerke [...] (bild. Kunst) oder zu bewerkstelligen (Architektur, Produktgestaltung). Lexikon der Kunst. 1968. Leipzig: VEB E.A. Seemann-Verlag. p. 735
- 13 For this incidence, see for example, Hirdina, Heinz. 1988. Gestalten für die Serie – Design in der DDR 1949–1985. Dresden: VEB Verlag der Kunst
- 14 See <http://www.marxists.org/reference/archive/stalin/works/1913/03.htm>. First published in *Prosveshcheniye*, Nos. 3–5, March–May 1913. In addition to this, I have used the Finnish edition here. (Stalin, J.V. 1913. (1950). *Kansallisuus ja kansalaisuuskysymys*. Sortavala: Karjalais-Suomalaisen SNT:n ministerineuvoston Poligrafizdatin Sortavalan kirjapaino.)
- 15 For an extensive account on the programme, see Rubin, Eli. 2008. *Synthetic Socialism. Plastics and Dictatorship in the German Democratic Republic*. Chapel Hill: University of North Carolina Press.
- 16 NÖSPL: Neues Ökonomisches System der Planung und Leitung
- 17 For NÖSPL see, for example Augustine, Dolores L. 2007. *Red Prometheus. Engineering and Dictatorship in East Germany 1945–1990*. Cambridge: MIT Press, pp. 93–101 and Wolle (2001) pp. 41–47. NÖSPL eventually led to the discharge of Ulbricht. For this, see Wolle (2001), pp. 51–53. Reasons for failure see e.g. Weber, Herrmann. 2006. *Die DDR 1945–1990*. München: Oldenbourg Wissenschaftsverlag pp. 64–64 and Augustine (2007), pp. 94–95.
- 18 After a long public debate, the conservative regional parliament of Baden-Württemberg decided to cut all funding due to debts the administrative foundation of HfG Ulm had and, importantly, considering the topic of this paper, to alleged left-wing activity. The institution was closed late 1968.
- 19 For this, see Wolle (2001), p. 72 and pp. 96–97
- 20 For example, Karin Hirdina wrote in the sole East German design magazine *Form+Zweck*: “Tatsächlich [...] bedeutete der Funktionalismus – als Programm und Methode, nicht als Stil Gefasst – utopische vorwegnahme einer nichtkapitalistischen Ordnung der beziehung zwischen Mensch und gegenständlicher Umwelt. Richtig verstanden, geht der Funktionalismus nicht auf im kapitalistischen System, bestätigt dieses nicht, sondern überschreitet es”. See Hirdina, Karin. *Der Funktionalismus und Seine Kritiker*. In *F+Z*, 3/1975, pp. 9–12
- 21 In addition to the article mentioned above, see, for example, *F+Z* 6/1976: a complete theme issue dedicated to Bauhaus, containing the following articles: Christian Schädlich: Das Bauhaus im Dessau; Klaus-Jürgen Winkler: Für eine neue Architektur; Adalbert Behr: Modell für das Neue Bauen; Ch. Kutschke and M. Siebenbrot: Farbe in der Festebene; Christian Schädlich: Leuchten von Max Krajewski; Ute Probst: Raumtextilien aus der Weberei; Berndt Grönwald: George Mucbe und sein Werk in der DDR; Richard Paulick: Das Stahlhaus in Dessau; Selman Selmanagic: Entwurf einer Arbeitersiedlung; Claude Schnaidt: Hannes Meyer und Das Bauhaus; Konrad Püschel: Die Gruppe Hannes Meyer in der Sovietunion and Selim O. Chan-Magomedow: Die ersten sowjetischen Diplom-Formgestalter. *F+Z* 3/1979 was another Bauhaus issue, covering the histories of Weimar Dessau and Berlin Bauhauses and presenting the lives and work of many of their key persons in detail.

22 For this, see for example Kelm, Martin. 1971. *Produktgestaltung in Sozialismus*. Berlin: Dietz Verlag

- 23 At least the following articles in the *Form+Zweck* magazine between 1972–1978 dealt with “scientific” methods in industrial design, product development, production and environmental design
F+Z 1/1972: Günther Höhne, Stand und Ziele der Konstruktionswissenschaft (pp. 6–8); Claus Krüger, Konstruktion und Gestaltung (ss. 14–15); Günther Reißman, Qualitätsmerkmal: Gestaltung (pp. 3–5)
F+Z 2/1972: Heinz Hirdina, Auf suche nach Methoden (pp. 4–6); Peter Luckner, Versuch zu einer Gestalteristischen Logik (pp. 10–11)
F+Z 6/1974: Johannes Uhlmann, Ästhetische Werkstätten-gestaltung osa 1 (pp. 40–43)
F+Z 1/1975: part 2, (pp. 41–44)
F+Z 2/1975: part 3, (pp. 44–48)
F+Z 3/1975: part 4, (pp. 41–44)
F+Z 5/1975: Alfred Hückler: Das unersetzbare an der Formgestaltung (pp. 30–32)
F+Z 1/1976: Karl Joachim Heinemann: Von Funktion zu Gestaltung (pp. 24–27)
F+Z 2/1976: [pp. 16–35 a set of articles examining icons and graphical symbols in machinery and equipment]: Rosmarie Goetze, Wert und Grenzen von Lernzeichen; Joachim Grund and Wolfgang Lippmann, Konsequenz Abstrahiert; Werner Miersch, Sinnbildgestaltung Methodisch; Harald Raum, Gestaltungsgüte praktisch erprobt; Wolfgang Spüler and Eberhard Flach, Von Begriffslogik zu Zeichenlogik; Waltraud Voshage and Iris Schwerdtle, Interdisziplinär entwickelte
F+Z 4/1977: Rolf Frick, Grundlagen für eine Fachmethodik (pp. 25–28)
F+Z 5/1977: Alfred Hückler: Der Weg zum Gegenständlichen (pp. 24–27)
F+Z 3/1978: Alfred Hückler: Geometrie und die erneuerung der Form (pp. 10–16)
F+Z 3/1978: Jiri Štejn: Gebrauchseigenschaften Mathematisch-Logisch modelliert (pp. 37–40).
- 24 For example, the oil crisis in mid 1970’s resulted in sudden rising of oil prices by the Soviets and as oil was almost solely imported from USSR this severely harmed the resourcing of the East German economy. The situation prevailed until the fall of GDR regime.

Michał Stefanowski

Design in Poland 2009

– the result of bottom up activities.

At the beginning few words about the past.

The presentations of Scandinavian speakers telling about roots of Scandinavian design usually start with the information about successful participation in the International exhibitions in Paris in 20s and 30s. These are also roots of Polish design – comparable number of awards was at that time achieved by Polish designers.

A number of interesting projects were created these days, though most of them were produced in rather limited quantities, because of not seriously developed industry.

Another reason of problems was the international crisis of these days and then Second World War, which destroyed the country and which resulted with establishing of communist system. Poland didn't lose its independence completely, like Lithuania and other Baltic countries, but on the other hand was not fully independent country.

Nevertheless, after period of domination of heavy industry in the 50ties, more and more companies producing consumer goods were created and designers had a role to play mainly in the 60s and 70s. A number of interesting designs appeared, but only some of them were implemented into production. The university level design education was created in the 60ties as well.

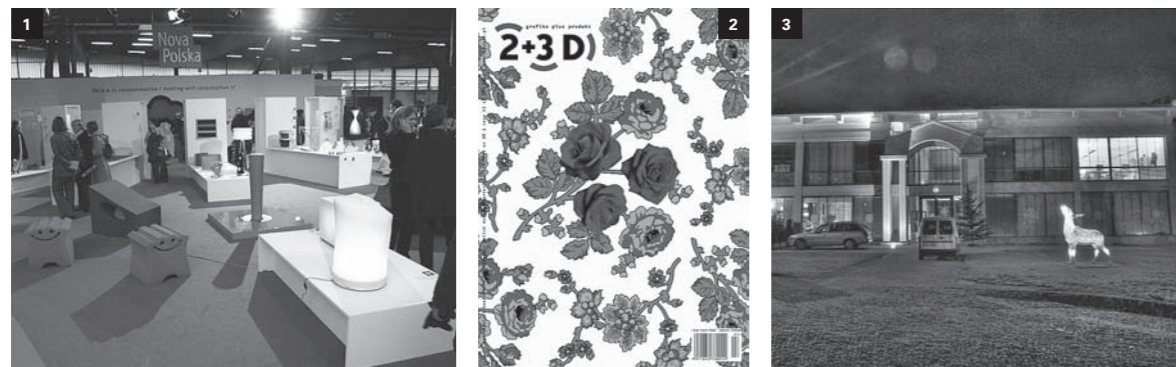
This is the background, which shows that design in Poland didn't start after 1989. Though this was a beginning of a completely new chapter. The most important is the fact, that unlikely in some other countries there was no plan of development of design. Free market economy was going to solve all problems. Designers expected that after period of transition, reasonable conditions for their activities would appear and following other countries, Polish authorities would start some policy supporting design as the element helping with the development of economy. So designers did their jobs waiting for the improvement of the discipline situation, but nothing happened. After some time they realized, that something has to be done and that if they will not be active, the situation will not change and Polish design will stay far behind all neighbours. So, a number of bottom up activities started.

Taking chance of Italian Design on Tour coming to Poland in 2003, we've organized together with our guests joint exhibition and conference about design, which made media paying some attention on Polish design.

Some time later designers from *nc Art* design studio created "Design PL", traveling exhibition, which was hosted by various places around Europe since 2004.

The same year Poland was invited as official guest to participate in Design Biennial in St-Etienne. The exhibition created by designers from the Association of Industrial Designers (*SPFP*) got the financial support of Institute of Adam Mickiewicz – governmental institution responsible for promotion of Polish culture abroad and was awarded Grand Prix.

At the beginning of 2006 we've organized the conference "Design – Culture and Economy", where after listening to the speakers from Poland and other coun-



1. Design Biennial in St-Etienne 2004. 2. 2+3D design magazine. 3. Silesian Castle of Art and Enterprise in Cieszyn – regional Design Centre.

tries round table with representatives of the government took place. This was one of the crucial moments leading to change of existing situation.

Meanwhile designers from Krakow filled the empty space on the editorial market and created "2+3D" magazine, high quality quarterly, which became not only source of informations, but also space for the exchange of ideas among designers. Another magazine "Vox Design" and internet portal "Rzeczy" appeared on the market. The other magazines included design into their content.

In late 2006 International Cumulus design education conference was organized in Warsaw by the Academy of Fine Arts and our Association. This was also another signal for the authorities that design exist and Poland has something to do with it.

All the time the education sector was more and more active, organizing cooperation with foreign universities as well as with various local and international partners, like *ikea*, *Nokia*, *Alessi*, *Volkswagen* and many others.

The students and young designers were successful taking part in various international competitions, being awarded many times.

2005 was the beginning of activities of Silesian Castle of Art and Enterprise in Cieszyn, regional Design Center located in Southern Poland, on Polish-Czech border. The Center was created as an initiative of local authorities and very quickly became one of the most important elements of Polish design puzzle.

Its main activities were based on the programme "Silesian Net for Design", concerning mainly direct cooperation with the industry. They also organized repeated every year exhibitions "Design in public space" and "Best Graduates" showing review of the situation at the academic sector.

They established regional design award "Silesian Icon" which quickly got good reputation. The award is given to the companies located in Silesia region.

One of the oldest institutions of this kind in Europe, created in the 50s, The Institute of Industrial Design in Warsaw was in deep crisis since 70s. In 2007 it was reborn under new management and since then plays very important role in design life in Poland.

Its main activities are: organization of Good Design National Award, co-organization of design festival in Gdynia, running post-graduate design management education, building designers directory and very recently starting "Design your Profit" programme.

Beside Gdynia, there are also Design Festivals in Łódź and Poznań. These young initiatives, very quickly achieved big scale and became very popular.

Organized by our Association and Warsaw Light Fair with cooperation of Osram company, International lighting competition "Light for..." started to build its reputation on this very competitive field.

So, all these bottom up initiatives finally were noticed by media and decision makers. They became convinced, that design plays very important role for the economy and culture.

While building the programme of the development of the country for the period 2007–2013, the Ministry of Economy devoted 186 mln Euro as the support for the implementation of design into industry in the Operational Programme "Innovative Economy". The Ministry of Higher Education stated Industrial Design as one of few strategic disciplines for the development of the country and devoted additional funds for the support of design education sector.

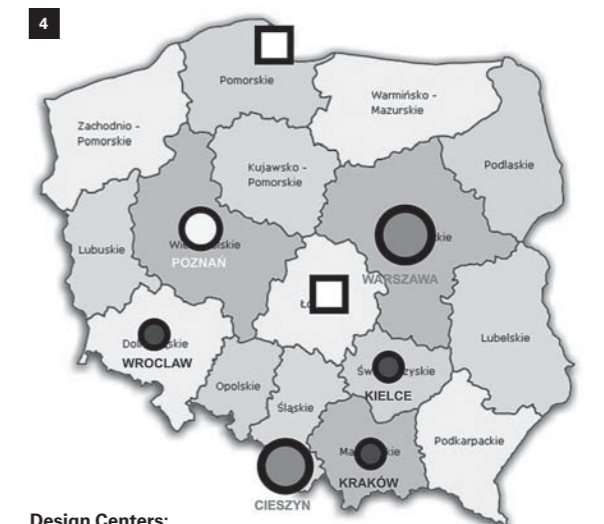
The other money, which may be used as the support for design can be found in various governmental programmes and programmes for Regional Development.

Based on the experience of British Design Council programme "Design your Profit", just started by the Institute of Industrial Design in Warsaw is directed to big number of entrepreneurs and designers. Its budget is about 5 mln Euro.

A number of regional design centers is created in various parts of the country. The one already active is Design Center Wielkopolska, located in Poznan. It is based on joint activities of local business and regional authorities.

Another one, initiated by the authorities of Kielce city is going to host Ceramics Design Center.

The other three initiatives of creation of regional design centers are at stage of organization, though the government just approved funds for the new Design and Applied Art Center building in Wrocław.



Design Centers:

- Established & active
- Just created
- Early stage / Under construction
- Design Festivals

4. Design related institutions and activities in Poland.

Of course, design has little sense if not related to industry. So, I would like to say few words about its present situation in Poland.

There are some branches, which after transition of Polish economy from centrally driven to this driven by the free market became quite successful. One of them is furniture industry.

These are producers of both office and home furniture, wooden and upholstered.

Most of these successful companies started in early 90s, very quickly developed and got big part of internal and external market.

Another successful branch is sector of public transport. A number of trams and trains producers is really busy and cooperating with designers.

Buses produced by Solaris company can be met not in Poland only, but also in many other countries. Apart of Solaris, there is about 5 other companies producing buses located in Poland.

Yacht shipyards got good reputation and started to develop quickly, producing mainly for export. This sector is unfortunately suffering strongly, because of present crisis.

After period of Soviet domination, when Polish designs were refused and couldn't become products, also aviation industry is getting new dynamics.

One of few examples of companies, which history started in communist times and are still successful in free market economy is Zelmer, producer of home appliances.

There are also niches of specialized equipment, where rather small companies produce high-tech products, like thermographic camera for Vigo System SA, as far as I know produced only by one company in US and one in Poland. Or like remote control vehicle filled with cameras, scanners, GPS etc.

There is also a good niche for machines.

Some of them more simple, some more sophisticated. Good example are products of Polpack company.

Having quite strong agriculture, Polish industry needs a lot of packaging and this is also good reason to employ

designers. This concerns also cosmetics industry.

Traditionally strong branches of Polish industry were glass and ceramics. Glass producers, like Krosno, were among those, who were strongly hit by the present crisis.

After collapse caused by the competition of Far East products, textile industry is also finding a new position on the market. Carpets producer, Agnella company offered designer a post of one of managing directors.

Very active on domestic and international markets are some cloth producers. Polish brands like Reserved, CroppTown and some others are really successful.

Some local authorities noticed a need of improving the quality of public space. One of the examples from that field maybe City Information System implemented in Warsaw in late 90s and developed till today.

There is a growing group of designers which organized their own production of objects invented by themselves. One of them is Puff Buff, company designing and producing inflated lamps.

Another is mono awarded many national and international awards for their various carpets made of felts.

Growing group of very young designers treats this discipline as the expression of their attitude to contemporary reality. Products designed by them are sell by art and design galleries.

Talking not only about Polish industry, but also about the situation of Polish designers, it is worth to say about few other examples. It is not our everyday story, but it happens, that Polish designers manage to win competitions on the international market. Good example is complex design commissioned by Danish Danfoss company realized by design company Studio Program and continued by NPDesign, both located in Warsaw.

Very active on Polish market, Tomek Rygalik, graduate of British RCA is working also for famous foreign companies, like Artek from Finland or Italian Moroso.

Another example is Andrzej Bikowski, educated in Łódź, working at the moment for Adidas and being an author of numerous leading shoes of this company including the shoes tailored specially for the Olympic Gold medal winners.



5. Slim armchairs. Design: Towarzystwo Projektowe. Producer: Noti.



6. Electric traction unit. Design: Marad. Producer: Pesa.



7. Unmanned Ground Vehicle Lewiatan. Design: INNO+NPD. Producer: WB Electronics.



8. Inflated lamps. Design & production: Puff Buff.

9. Everis radiator thermostats. Design: Studio Program/NPD. Producer: Danfoss.

So, to summarise, we found ourselves in very unusual situation. Only four years ago, no active institutions supporting design existed, there was no financial and organizational support from the authorities, there were only relatively good education sector producing each year number of graduates, hardly finding jobs and small number of producers understanding role of design. Thanks to various joint activities of design community, the present situation is totally different.

There is amount of money for support of design, which makes us frightened that it may be wasted.

There is a number of institutions supporting design and design related activities in various parts of the country.

There are active professional designers associations like SPFP and STGV, working on behalf of their members.

There are design schools state and private, located mainly in the Academies of Fine Arts but also at Technical University.

Each year they produce appr. 320 graduates at BA level and appr. 140 at MA level. More and more of them decides to establish design studios and work for the industry.

There are governmental institutions actively supporting design like PARP (National Agency for the Development of Entrepreneurship) and Institute of Adam Mickiewicz responsible for the promotion of Polish culture abroad.

Described situation gives opportunities, but doesn't give any guarantees. Majority of Polish producers still doesn't understand and doesn't use design. Many designers still doesn't know how to take advantage of the new situation and struggles on the tough market. So, still big work has to be done. Anyway, good opportunities appeared and there is a chance. Opportunities, which we never had in such a scale.

Although everything looks nearly like paradise, many obstacles is around. One of them is an issue discussed everywhere this year. The financial crisis.

The truth is that the economical situation in Poland was relatively not bad in 2009. The crisis really touched

some branches of economy, but majority didn't suffer severely. Low position of Polish currency helped the companies exporting goods. Apart from the export, Poland has also relatively big internal market, so many companies could survive though general export breakdown. Another reason was rather conservative approach of Polish producers towards public funds and credits. Many of them prefers to develop slower, but safer, depending on their own funds. This approach is limiting fast development on a big scale, but on the other hand is helpful in the situation of crisis, which we are facing nowadays.

The big question mark is 2010. It may be a continuation of development, but maybe beginning of stagnation.

Nevertheless, this way or another, though we don't know what the future will be, without any top down strategic plan, mainly thanks to bottom up joint activities of many people, we've succeeded to make design growing on a hard Polish soil. Shall we be able to take this chance? I hope yes, but nobody knows...

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Agnese Miltina

Situation analysis of Latvian design education

1. The education system of Latvia, academic and vocational education.

The education system of Latvia has been described, academic and vocational education of all education levels has been outlined.

2. Place of design education in the education system of Latvia. Latvian design education institutions at all education levels.

A list of Latvian educational institutions providing design education or an education connected with the design field has been drawn up and a brief summary describing design programmes has been provided.

3. Description of educational institutions, their comparison with kindred foreign educational institutions. Latvian Academy of Arts, the Baltic International Academy and foreign design higher education establishments popular in Latvia have been chosen to provide an insight into their work.

4. Positive and negative features of the current design education.

After carrying out a survey at educational establishments, among design specialists, businesspersons and based on discussions with the Latvian Employers' Confederation, familiarizing themselves with studies carried out and the situation analysis in the field of design, the working group of the development of design education concept found:

4.1. Positive features

- 1.** Design education or design-related education in Latvia is offered by
 - **11** higher education establishments
 - **12** vocational secondary education establishments
- 2.** There are more than 70 schools in all regions of Latvia where children can acquire basics of visual art. It helps develop the public's taste and understanding

about the creative art process.

- 3.** There is a stable vocational education with a broad offer of specialities.
- 4.** Latvia has strong traditions of decorative arts and craft. Thus it is possible to create a separate design education trend without destroying old values.
- 5.** Historically design education is based on familiarising students with the ethnographic heritage thus providing understanding about national values.
- 6.** The State Culture Capital Fund within its Interdisciplinary programme supports local and international design activities of educational institutions by organizing competitions and allocating funding for students' participation in exhibitions and seminars, by awarding scholarships for studies abroad or for participation in creative workshops or for creative trips. Such support facilitates activities of schools and students.
- 7.** The target-programme of the State Culture Capital Fund "Improvement of a material and technical basis of art education institutions" organizes project competitions thus providing an opportunity for educational establishments to upgrade their workshops.
- 8.** Most of educational institutions are active and interested in participation in international exhibitions and competitions. They have their own cooperation partners and events in which they participate on a regular basis
- 9.** Schools actively participate in design events in Latvia, it is them that come up with initiatives but not designers, manufacturers or design institutions.
- 10.** Design-related educational establishments in regions often act as culture centres by cooperating with local governments.
- 11.** Schools have understanding and will to change curricula and teaching methods.
- 12.** Pedagogues are ready to improve their professional skills, attend courses and seminars, and obtain a qualification if such an opportunity is offered.
- 13.** There are design schools in which competition at entrance examinations is severe despite the demographic situation.
- 14.** There are schools which develop new curricula to ensure the necessary number of pupils/students.
- 15.** The public's interest about design and design-related activities is increasing. It might positively influence the prestige of a designer's profession and its evaluation by society.

- 16.** Over the past two years many young designers have expressed a wish to become design pedagogues.
- 17.** A new law on state higher education is being developed. It will solve many current problems

4.2. Negative features

- 1.** The state (the Ministry of Education and Science, the Ministry of Economics) has not defined the designer's profession as a demanded and perspective profession despite development perspectives of the creative industry.
- 2.** There is no study on market research.
- 3.** There is no uniform state design education development concept.
- 4.** A real education succession has not been ensured.
- 5.** There are not enough full-fledged design education and study programmes in line with modern requirements in Latvia.
 - A lack of contemporary teaching methodology in educational institutions; a teaching methodology is more passive than interactive.
 - Curricula are offered only in traditional fields, not in business administration, design management, service design, and design theory.
- 6.** The implementation of design programmes in higher education institutions is under supervision of different ministries.
- 7.** Many higher education establishments and vocational secondary schools do not have a clearly defined objective and vision for further development.
- 8.** Education quality differs among schools of the same level.
- 9.** The current education opportunities not always ensure the preparation of specialists necessary for the labour market according to demand.
- 10.** There is no real link between a school and producer.
- 11.** Due to restrictions of different rules and regulations full-fledged work of an educational establishment is impossible, i.e. attraction of foreign and local specialists as teaching staff, a lack of teaching aids, including literature, the public procurement procedure for obtaining different equipment, etc.
- 12.** There is a problem in the development of professional standards and involvement of producers in this process.
- 13.** Lots of academic personnel and school pedagogues do not have a respective qualification in designer training. There are not enough opportunities for professional development and further education both regarding academic personnel and professionals of the creative industry.
- 14.** Many best specialists do not have motivation to work in the field of design education due to the underpaid job of a school pedagogue.

- 15.** There is a lack of premises, as well as material and technical basis.
- 16.** Funding of educational establishments for obtaining a quality education is insufficient.
- 17.** Basically, conformity of a school's documentation with the legislation is evaluated when accrediting an educational establishment. Real education quality also has to be taken into account.

5. Concept of design education.

In order to develop design industry in Latvia and promote prestige of a designer's profession in general public, as well as to increase knowledge and professional competence of designers as specialists of a creative industry, by observing succession of design education, in order to introduce contemporary design education training methods, develop design continuity and knowledge based in it, as well as reasonable use of material and non-material resources, a uniform state design education concept has been worked out.

To carry out this

- 1.** Basis for appropriate education and study programmes have been made on
 - A.** Doctor's level;
 - B.** Master's level;
 - C.** Bachelor's level;
 - D.** College education;
 - E.** Vocational secondary education;
 - F.** Further education programme – design pedagogue;
 - G.** Improvement of professional skills in the field of design.
- 2.** Programmes have been adjusted in compliance with documents regulating education in the European Union and Latvia.
- 3.** Succession of education has been observed, content complying with time and labour market development demands has been introduced by including cooperation of companies and educational institutions and modern training methods. Such an approach allows making interdisciplinary training and also research model not only among Latvian higher educational establishments but also international design and business higher education establishments.

By organizing for this offered structure appropriate study and subject programmes, that is already under the competence of each educational institutions, it is possible, by ensuring acquisition of education programme of the respective level, to prepare highly qualified specialists demanded by labour market on different levels for creative activities in the design industry and the related fields, for instance, education, business activities, research, etc.

6. Place of design and planned development in state documents and normative acts.

7. Design-related institutions and their activities in Latvia.

8. Producer and designer. Producer and a school. Contemporary design education that meets market demands is not imaginable without real cooperation of educational institutions and manufacturers or service providers. Getting acquainted with the world practice, taking into account the real situation in Latvia, design education concept provides for several such models of the mutual cooperation.

In order to implement any of these:

1. There should be mutual cooperation agreements between the Republic of Latvia Ministry of Economics, (Investment and Development Agency of Latvia) as representatives of manufacturers, the Republic of Latvia Ministry of Education and Science that is responsible for implementing qualitative education in the state and the Republic of Latvia Ministry of Culture under the subordination of which are the leading design and art educational institutions.
2. The agreement should envisage responsibility of parties, their obligations and rights when implementing qualitative design education and study programmes. Each of the ministries, while performing activities within the scope of their competence, provide their share into a full-fledged implementation of design education programmes:

This agreement and its implementation in real life would guarantee a real investment for all the interested parties for successful implementation of the new programmes and would form base for practical and well-grounded cooperation between educational institutions and manufacturers or service providers.

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Jane Pavitt

Cold War Modern:

Design 1945–70: an Exhibition at the V&A Museum, London

It is a great pleasure to be giving this talk at the National Gallery in Vilnius, host to the V&A's exhibition *Cold War Modern*. I wish to extend my thanks to the convenors – Marius and Laima – of the Cumulus conference 'Design of Change' at the Academy of Arts (where we have spend a rewarding day in discussion of such issues), and to Lolita Jablonskiene, Director of the National Gallery of Art, Vilnius, who first approached me with the idea of collaborating on the exhibition some 3 years ago. Our collaboration not only gave us fresh insight into the subject of cold war cultures, but also fuelled our ambition to present the show in Lithuania in 2009.

Cold War Modern was the outcome of a four year research project undertaken with the historian and Eastern European specialist David Crowley (Royal College of Art, London), which culminated in the exhibition held at the V&A at the end of 2008. The exhibition toured to Italy before opening in Vilnius last week. David and I proposed the exhibition as an intervention into a series of exhibitions on 20th century style and modernity. This series included the V&A exhibitions *Art Nouveau* (1999), *Art Déco* (2003) and *Modernism: Designing a New World 1914–39* (2006). Our primary motivation for an exhibition of post war design was to cast the subject in an alternative political-cultural framework, rather than focus only on design from the West.

This evening I would like to take you through the themes and objects of our exhibition, describing how the political and cultural conditions of the Cold War shaped the course of Modernism in architecture and design after the war. In doing so, I hope I will show that buildings, objects and artworks were not only the *products* of a Cold War world, but also its agents. Posters, buildings, exhibitions – as well as theatre, film, sporting events – all

were used to huge propaganda effect by both East and West, as I will demonstrate. Yet architects and designers also (like artists, authors and playwrights) could use their work to produce a powerful critique of Cold War power and politics, often at huge risk to themselves.

The Cold War can be characterised in many ways. A superpower conflict which affected almost everywhere the globe, forcing nations to take sides and forge alliances; an ideological battle which was waged without recourse to weapons in the West, but provoked numerous 'hot wars' in other parts of the world; a contest between two spheres of influence to prove superiority in the fields of science, technology and military intelligence – these are just three of the ways. In *Cold War Modern* we proposed another – that the Cold War can also be characterised as a competition to demonstrate a superior modernity, and to win a battle over hearts and minds by the promise of a better life.

Architecture and design were fundamental to this competition. New homes, new domestic goods, access to transportation for all, better working environments, better clothes, the meeting of everyday needs and wants for every man, woman and child. Both sides in the Cold War – especially in the 1950s and 1960s – made such promises to their citizens. Where they differed was the means by which this would be achieved. In America (and broadly in the West) the free market would be the route to affluence for all. In the East, the state claimed it would meet the material needs of its citizens, by means of a command economy and centralised production.

An idea for an exhibition can start with a single object – in our case, a photograph, taken in 1959 at the American National Exhibition in Moscow. It shows Premier Nikita Khrushchev in animated conversation with the then Vice President Richard Nixon – they are leaning over a barricade in front of a display of a mass produced fitted kitchen, in front of a crush of journalists and minders. The exhibition was a bravura work of American cultural diplomacy, sent to Moscow in the spirit of a cold war détente which occurred briefly in the late 50s, to show soviet citizens the products of affluence and efficiency which marked the American way of life. A massive piece of propaganda (only two years before, the Soviets had launched Sputnik, thus claiming the lead in the space race – the corresponding exhibition of Soviet goods in New York celebrated these achievements) – the exhibition had a deeply unsettling effect on Soviet authorities. Nixon and Khrushchev, in a spir-

ited exchange, argued the case for their relative ideological systems as they walked through the exhibition. Which, they pondered, would produce a better quality of life for all? Nixon is smooth and polished, Khrushchev more prone to bluff and bluster, boasting 'we too have such things.' Nixon challenged him 'would it not be better to compete in the relative merits of washing machines than in the strength of rockets?' The Cold War had found a new battlefield: the home.

Modern life after 1945 seemed to promise both utopia and catastrophe. By the end of World War Two, visions of new cities were being forged in the ruins of war-torn Europe. Reconstruction was understood in social, political and moral terms – in Western Europe, the creation of democratic and progressive societies was the goal. With the support and influence of the United States through the Marshall Plan, democracy increasingly became elided with the freedoms of the market and the consumer society. The promise of affluence was also seen as an effective bulwark against communism. The sight of new cities rising from the ruins had a crucial propagandist effect – as seen in these competing visions for Berlin, East and West.

So – kitchens, computers, microwaves, satellite communications, transistor radios: by the late 1950s, Cold War competition had generated numerous consumer applications for the technologies of a militarised world. Modern life could be achieved at the push of a button. Yet, it could also be annihilated in the same way. The atomic age brought a new level of anxiety to a world already traumatised by a global war. Two extraordinary works of public sculpture – one built, one unbuilt, open our exhibition. Isamu Noguchi's unbuilt *Memorial to the dead of Hiroshima* (1952) planned for Hiroshima Peace Park, contained a crypt which Noguchi compared to a womb, which would not only commemorate the dead but nurture the future generation. Ossip Zadkine's *City Destroyed* (1947) – made for Rotterdam – was his anguished response to the site of almost totally destroyed cities on his postwar return to Europe. Le Corbusier – architect in chief of utopia – proposed a scheme for an underground cathedral in 1948 (Saint-Baume) – a

place of sanctuary, but also a potential bunker?

So, a period of history lived in the shadow of the bomb, which produced an extraordinary range of utopian visions for the future. In architecture, Cold War debates polarised the discussions of future utopias. 13. These two buildings seem to typify the notion that the Cold War was marked by aesthetic oppositions between East and West. On the one hand, the monumental, neo-classical and self-aggrandising style of Stalinist architecture – one of eight tall towers planned for Moscow in 1947 (7 built) – a style of architecture formulated in the 1930s, but the first time skyscrapers had been built in the Soviet Bloc. On the other – the Lever Building in Manhattan, one of the first two glass curtained walled skyscrapers to be built in NY. This gleaming tower represented the successful incorporation of European style Miesian modernism into corporate America.

Aesthetic opposition – the idea that whilst the East rejected modernism in favour of tradition, the West championed abstraction, for instance, is a far too simplistic characterisation of the post-war arts. However, in the late 1940s, vitriolic debates raged about the role of art in politics. I will briefly mention two examples we explore in detail in the exhibition. The first is the case of Picasso, whose membership of the Communist Party in France and key position in the international avant-garde made him a cause for concern in West and East respectively. The second is a controversial international competition to design a *Monument to the Unknown Political Prisoner*, organised by London's Institute of Contemporary Art but covertly funded by political interest from the USA. This competition invited entries of a modernist character, and considered placing the winning entry (by British sculptor Reginald Butler) in a prominent location in West Berlin, where it would stand as an obvious symbol of opposition to the Socialist Realist monuments erected in the East. Although the monument was never built, the competition served to intensify the already polarised debates over the political nature of public memorials in the period.

But by the late 1950s the Cold War situation regarding the role of modern design has become marked-

ly more complex. After Stalin's death, Khrushchev announced a programme of reforms which would pave the way to the modernisation of the socialist society through technology. New housing needs would be met by a new 'factory' system of construction. New goods would be produced by rationalised and centralised industries: the model for this, perhaps, was the East German chemical industry, which led to a rhetoric of 'socialist plastic.' These changes, whilst their eventual impact upon the living conditions of the majority was limited, nevertheless served to re-structure the roles of architects and designers, and also opened the door for the partial return of modernism to their practice. Experimental design bureaux were established, and research projects allowed for the development of new product ideas, some of which we were able to show in the exhibition. This is the 'forgotten' history of modernism in post-war Europe.

The vision of a bright and colourful future, fashioned from plastic, was therefore co-existent in the East and the West from the late 1950s onwards. But despite this optimism, a sense of crisis was never far away. Signs of détente were always short lived – the building of the Berlin Wall in 1961, the Cuban Missile Crisis of 1962 – were sharp reminders of this. Not only utopia – but dystopia – fuelled the creative visions of the 60s (such as Stanley Kubrick's film *Dr Strangelove Or: How I learned to Stop Worrying and Love the Bomb*, 1964). They could even be present in the same object (for example, Richard Buckminster Fuller – Scheme for a dome for covering part of New York city, 1962).

And here lies the central paradox of Cold War experience: an era which presented both prospects of unspeakable horror and hitherto unimaginable achievements. By 1949, both of the world's superpowers had acquired the capacity to annihilate each other with nuclear weapons – twenty years later, man walked on the moon.

The Space Race, inevitably, form the backdrop to the central section of our exhibition, which include objects such as a sputnik, spacesuits and a large-scale model of the capsule which took Yuri Gagarin into orbit. Fashions, furniture, interiors, body adornment and film – including Kubrick's film 2001 and Tarkovsky's *Solaris* – showed the extraordinary penetration of the space race into every day life. But the Cold War space race provided more than just an image of a shiny silver future. It ushered in a new age of global communications – witnessed in our show by the fantastical futuristic architecture of the teletower (such as Jěstéd Tower in Liberec, Czech Republic (SIAL group led by Karel Hubáček, 1968–73) and the technotopian architecture of a new generation (the British architectural group Archigram). The space race also changed perceptions of the relationship between man and technology, and brought

with it a new conception of the planet. Once man had seen the earth from space – a tiny blue globe spinning in an endless universe – a more eco-conscious rhetoric which chimed with the mood of the late 60s started to emerge.

The final part of the exhibition looks, once again, at when politics and culture collided with visceral effect in the late 1960s. A renewed image of revolution emerged in the events of 1968 – shown in our exhibition through film, posters and artworks. Even the design world was challenged – at the Milan Triennale of 1968. Europe's premier design fair was disrupted by protesters, who occupied the exhibition and defaced the installations – an extension of the intellectual and political protests which had swept through Paris earlier that year.

In our closing section, we examine how the political consciousness of the 60s fused with the techno-utopian sensibilities of late Modernism to produce one last and vigorous utopian moment. Harnessing the technologies of the Cold War (computers, geodesic domes, cybernetics), a generation of architects and designers designed visionary schemes for future living. These utopian visions of the 1960s were synthetic and ephemeral and – as they employed technologies such as pneumatic plastic structures – often liable to pop at any moment. Most, given the conditions under which they worked – were located in the West, but avant-garde practice did find unexpected outlets even in the Eastern Bloc – we include works by experimental architects and designers in Russia, Slovakia and Poland, for instance. The products of cold war utopia and dystopia – such as Fuller's geodesic domes – were recycled for new use – housing drop out communities, or used (as in this poster) with a new environmental message. In this final phase of modernist experimentation – already imploding on itself and issuing the first shoots of postmodernity – a new environmental consciousness emerges. Buckminster Fuller's dome – once used for military and propaganda purposes, is recast with an environmental counter-cultural message – and one which has even greater relevance for us today. I hope you enjoy our exhibition here tonight.

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List of cumulus members 1/2010

42 countries & 150 members

AUSTRALIA (2)

- Swinburne University of Technology, Faculty of Design, **Melbourne**
- Royal Melbourne Institute of Technology (RMIT), **Melbourne**

AUSTRIA (5)

- University for Applied Science (FH-JOANNEUM), Industrial Design, **Graz**
- Vorarlberg University of Applied Sciences, Media Design, **Dornbirn**
- University of Art and Design **Linz**
- Salzburg University of Applied Science, **Salzburg**
- University of Applied Arts **Wien**

BELGIUM (4)

- Katholieke Hogeschool Limburg, Media and Design Academy, **Genk**
- Sint Lukas Brussels University College of Art and Design, **Brussels**
- **Mechelen** University College of Design Innovation, **Charleroi** (Associate Member)

BRAZIL (2)

- Pontificia Universidade Católica do **Rio de Janeiro** – PUC-Rio
- Universidade do Valo do Rio dos Sinos (UNISINOS) Design School, **Porto Alegre**

CANADA (3)

- Ontario College of Art & Design **Toronto**
- Emily Carr University of Art and Design, **Vancouver**
- University of Montreal, School of Industrial Design, **Montreal**

CHILE (2)

- Pontificia Universidad Católica de Chile (PUC Chile), FADEU, **Santiago**
- Instituto Profesional DuocUC, School of Design, School of Communication, **Santiago**

CHINA (8)

- Central Academy of Fine Arts CAFA, School of Design, **Beijing**
- Hunan University, School of Design, **Changsha**
- Shandong University of Art and Design (SUAD), **Jinan**
- Hong Kong Polytechnic University, School of Design, **Hong Kong**
- Tongji University, College of Architecture and Urban Planning (CAUP), **Shanghai**
- Tsinghua University, Academy of Arts and Design, **Beijing**

- Cheung Kong School of Art and Design, Shantou University, **Shantou**
- Zhejiang University, Department of Industrial Design, **Hangzhou**

CZECH REPUBLIC (1)

- Academy of Arts, Architecture and Design, **Prague**

DENMARK (4)

- Aarhus School of Architecture, **Aarhus**
- Danmarks Designskole, **Copenhagen**
- Royal Danish Academy of Fine Arts, School of Architecture, **Copenhagen**
- Designskolen **Kolding**

ESTONIA (1)

- Estonian Academy of Arts, **Tallinn**

FINLAND (6)

- Aalto University School of Art and Design **Helsinki** (Coordinator of Cumulus)
- HAMK University of Applied Sciences, Programme in Design, **Hämeenlinna**
- Lahti University of Applied Sciences, Institute of Design, **Lahti**
- University of Lapland, Faculty of Art and Design, **Rovaniemi**
- **Helsinki** Metropolia University of Applied Sciences
- Savonia University of Applied Sciences, Kuopio Academy of Design, **Kuopio**

FRANCE (17)

- Ecole de design Nantes Atlantique, **Nantes**
- Institut d'Arts Visuels (IAV), School of Higher Education in Art and Design, **Orléans**
- Ecole d'Art Maryse Eloy, **Paris**
- **Paris** Institute of Art and Design, Ecole Boule
- **Paris** Institute of Art and Design, Ecole Duperré
- **Paris** Institute of Art and Design, Ecole Estienne
- Ecole de Communication Visuelle (ECV), **Paris**
- Ecole Supérieure d'Arts Graphiques et d'Architecture Interieure-Design (ESAG)-Penninghen, **Paris**
- Olivier de Serres, **Paris** – École Nationale Supérieure des Arts Appliqués et des Métiers d'Arts
- Les Ateliers – Ecole Nationale Supérieure de Creation Industrielle, **Paris**
- Reims School of Art & Design, Department of Design and Art, **Reims**
- Strate College Designers, **Paris**

- Ecole Supérieure d'Art et Design de **Saint-Etienne** (ESADSE)
- Ecole Internationale de Design (EID), **Toulon**
- University of Toulouse Le Mirail, Art and Design Department, **Toulouse**
- Parsons Paris School of Art and Design, **Paris**
- Higher School of Visual Arts and Design (ENSAD), **Paris**

GERMANY (7)

- University of Applied Sciences **Cologne**, Köln International School of Design (KISD)
- Folkwang University, Faculty of Art and Design, **Essen**
- Burg Giebichenstein University of Art and Design, Faculty of Design, **Halle**
- Hochschule für Gestaltung **Offenbach am Main**
- Pforzheim University of Applied Sciences, School of Design, **Pforzheim**
- Hochschule für Gestaltung, **Schwäbisch Gmünd**
- University of Applied Sciences **Würzburg**, Faculty of Design

GREAT BRITAIN (10)

- Arts University College at **Bournemouth**
- **Edinburgh** Napier University, School of Arts and Creative Industries
- **London** Metropolitan University, Sir John Cass Department of Art, Media and Design
- Ravensbourne College of Design and Communication **London**
- Royal College of Art **London**
- University of **Salford**, School of Art & Design
- University College Falmouth, **Cornwall**
- University for the Creative Arts, **Epsom**
- Gray's School of Art, The Robert Gordon University, **Aberdeen**
- **London** College of Communication, University of the Arts

GREECE (1)

- Technological Educational Institution (T.E.I.) of **Athens**, Faculty of Art and Design

HUNGARY (1)

- Moholy-Nagy University of Art and Design **Budapest**

ICELAND (1)

- Iceland Academy of the Arts **Reykjavik**

INDIA (2)

- Ujwal Trust, Srishti School of Art, Design and Technology, **Bangalore**
- Indian Institute of Technology **Bombay** (IIT), Industrial Design Centre (IDC)

IRELAND (2)

- National College of Art and Design **Dublin**
- Dublin Institute of Technology (DIT), School of Art, Design and Printing, **Dublin**

ISRAEL (1)

- Bezalel Academy of Arts and Design, **Jerusalem**

ITALY (8)

- Free University of Bozen – **Bolzano**, Faculty of Design and Art
- Domus Academy, **Milan**
- Istituto Europeo di Design – Scuola S.p.A., **Milan**
- Politecnico di Milano, Facoltà del Design, **Milan**
- University of Rome "La Sapienza", Industrial Design, **Rome**
- ISIA di Roma, Istituto Superiore Industrie Artistiche, Industrial Design, **Rome**
- Scuola Politecnica di Design (SPD), **Milan**
- ISIA **Florence**, Higher Institute for Artistic Industries

JAPAN (5)

- Kyoto Seika University, Faculty of Art, Design and Manga, **Kyoto**
- Tokyo Zokei University **Tokyo**
- Nagoya City University, School of Design and Architecture, **Nagoya**
- **Chiba** University
- **Kobe** Design University, Faculty of Arts & Design

LATVIA (1)

- Art Academy of Latvia, **Riga**

LEBANON (1)

- Lebanese American University, **Beirut**

LITHUANIA (1)

- Vilnius Academy of Fine Arts, **Vilnius**

THE NETHERLANDS (5)

- Design Academy **Eindhoven**
- Royal Academy of Art, **The Hague**
- **Rotterdam** University, Willem de Kooning Academy
- **Utrecht** School of the Arts, Faculty of Visual Art and Design
- Windesheim University of Applied Sciences, **Zwolle**

NEW ZEALAND (2)

- Unitec New Zealand, Department of Design and Visual Arts, **Auckland**
- Victoria University of Wellington, Faculty of Architecture and Design, **Wellington**

NORWAY (5)

- Bergen National Academy of the Arts (KHiB), **Bergen**
- Akershus University College, Department of Product Design, **Blaker**
- Oslo National Academy of the Arts (KHiO), Faculty of Design, **Oslo**
- Oslo School of Architecture and Design (AHO), **Oslo**
- Oslo University College (HiO), Faculty of Art, Design and Drama, **Oslo**

POLAND (2)

- Jan Matejko Academy of Fine Arts, **Cracow**
- Academy of Fine Arts, Faculty of Industrial Design, **Warsaw**

PORTUGAL (2)

- Instituto de Artes Visuais Design e Marketing (IADE), Escola Superior de Design, **Lisbon**
- Escola Superior de Artes e Design (ESAD), **Senhora da Hora**

REPUBLIC OF KOREA (3)

- Kookmin University, Graduate School of Techno Design, **Seoul**
- Hongik University, International Design School of Advanced Studies (IDAS), **Seoul**
- Seoul National University, Future Culture Design Agency, **Seoul**

RUSSIA (4)

- Moscow State University of Design and Technology, **Moscow**
- **Saint Petersburg** State University of Technology and Design, Department of Design
- **Saint-Petersburg** State Polytechnical University
- NextArt International Foundation of Fashion and Art Development, **Moscow** (Associate Member)

SINGAPORE (1)

- Temasek Polytechnic, Temasek Design School, **Singapore**

SLOVAKIA (1)

- Academy of Fine Arts and Design **Bratislava**

SLOVENIA (2)

- University of **Ljubljana**, Academy of Fine Art and Design
- University of **Ljubljana**, Department of Textiles

SOUTH AFRICA (1)

- Greenside Design Center, College of Design, **Johannesburg**

SPAIN (2)

- Escola Superior de Disseny Elisava, **Barcelona**
- **Mondragon** Goi Eskola Politeknikoa, Mechanical Department and Chair of Industrial Design

SWEDEN (10)

- University College of **Borås**, Swedish School of Textiles
- Chalmers University of Technology, Dept. of Product and Production Development, **Gothenburg**
- University of **Gothenburg**, Faculty of Fine, Applied and Performing Arts
- University of **Gothenburg**, HDK Steneby, School of Design and Craft
- University of **Kalmar**, School of Design
- **Lund** University (LTH), Industrial Design
- Beckmans College of Design, **Stockholm**
- Konstfack **Stockholm**
- **Umeå** University, Umeå Institute of Design
- **Linnaeus** University, Department of Design

SWITZERLAND (5)

- Nordwestschweiz, University of Art and Design (FHNW), **Aarau & Basel**
- **Genève** University of Art and Design (HEAD)
- University of Art and Design **Lausanne** (ECAL)
- **Lucerne** University of Applied Sciences and Arts
- **Zürich** University of the Arts, Department Design & Art Education

TAIWAN (2)

- National Yunlin University of Science and Technology (YunTech), College of Design, **Yunlin**
- National Chiao Tung University, Institute of Applied Arts, **Hsinchu**

TURKEY (2)

- **Istanbul** Bilgi University, Visual Communication Design Department
- Anadolu University **Eskisehir**

USA (5)

- Maryland Institute, College of Art (MICA), **Baltimore**
- Rocky Mountain College of Art and Design, **Denver**
- Art Center College of Design, **Pasadena**
- Parsons The New School for Design, **New York**
- Ringling College of Art and Design, **Sarasota**

