REVIEW

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A summary of the first World Creative Forum
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EXPLORING THE IMPACT OF CREATIVITY ON BUSINESS AND SOCIETY

WORLD
CREATIVE
FORUM

Baroness Susan Greenfield
As a consequence of working in both biochemical and electrophysiological environments Susan Greenfield has developed a multi-disciplinary approach to exploring novel neuronal mechanisms in the brain that are common to regions affected in both Alzheimer's and Parkinson's disease. Professor Greenfield has a supplementary interest in the neuro-scientific basis of consciousness, and accordingly has written 'Journey to the Centres of the Mind: Toward a Science of Consciousness', and 'Private Life of the Brain'. She has also written 'The Human Brain: A Guided Tour', which ranked in the best seller list for hard and paperbacks.

She held the Gresham Chair of Physic from 1996-1999, and has received 18 honorary degrees. In 1998 she was awarded the Michael Faraday medal by the Royal Society and in 1999 was elected to an Honorary Fellowship of the Royal College of Physicians. She is also involved in science policy and has given a consultative seminar to the Prime Minister on the future of science in the UK. She was awarded the CBE in the Millennium New Year's Honour's List and a Life Peerage (non-political) in 2001.

Sir Tim Berners-Lee
Whilst at CERN in Geneva, Switzerland, Tim wrote, for his own private use, his first programme for storing information. This programme formed the conceptual basis for the future development of the World Wide Web. In 1989, he proposed a global hypertext project, to be known as the World Wide Web. He wrote the first World Wide Web server, 'http', and the first client, 'WorldWideWeb'. This work was started in October 1990, and the program 'WorldWideWeb' first made available within CERN in December, and on the Internet at large in the summer of 1991.

In 1994, Tim founded the World Wide Web Consortium at the Laboratory for Computer Science (LCS) at the Massachusetts Institute of Technology (MIT). Since that time he has served as the Director of the World Wide Web Consortium

In 1999, he became the first holder of the 3Com Founders chair at LCS, and is now a Senior Research Scientist within the Lab. He is the author of 'Weaving the Web', on the past present and future of the Web.

Professor Richard Florida
Richard is the Heinz Professor of Economic Development at Carnegie Mellon, where he also heads the Software Industry Center. He has been a visiting professor at MIT and Harvard University's Kennedy School of Government. He is currently a Visiting Scholar at the Brookings Institution in Washington DC. Richard is also founder and principal of two companies, the Creativity Group, and Catalytix, a strategy-consulting firm that works with regions, governments and corporations around the world.

Richard is the author of the best-selling book, 'The Rise of the Creative Class'. The book has stimulated an international debate about the causes and consequences of economic growth. The book was awarded the Political Book Award for 2003 by the Washington Monthly and named by the Globe and Mail as one of the ten most influential books of that year.

Cities and regions across the United States and the world have embarked on new creativity strategies based on the thinking in the book. He is co-author of five other books and more than 100 articles in academic journals.

Antony Gormley
Antony Gormley was born in London in 1950. Upon completing his studies at Trinity College, Cambridge, he travelled to India, returning to London three years later to study at the Central School of Art, Goldsmiths College and the Slade School of Art.

Throughout his career, Gormley has used his own body as an archetype, the starting point from which to explore the relationships between bodies and the contexts which they inhabit, primarily through the medium of sculpture. Over this time he has created some of the most ambitious and recognisable works of the past two decades including *Field*, *The Angel of the North* and *Quantum Cloud* for the Millennium Dome in Greenwich.

He has created large-scale installations in Germany and China, has participated in group shows such as the Venice Biennale and Documenta 8, and has had solo exhibitions at the Whitechapel Gallery, the Serpentine Gallery and White Cube. He was awarded the Turner Prize in 1994 and the South Bank prize in 1999.

KEYNOTE SPEAKERS AT THE FIRST WORLD CREATIVE FORUM

Daniel Libeskind
Daniel Libeskind is well-known for introducing a new critical and multi-disciplinary discourse into architecture. He received his professional architectural degree at the Cooper Union for the Advancement of Science and Art in New York City and a postgraduate degree in History and Theory of Architecture at the School of Comparative Studies at Essex University.

His career began with the building of the Jewish Museum Berlin, a competition he won in 1989, which opened in September 2001. Some of his other works include: his museum for the city of Osnabrück, Germany; The Felix Nussbaum Museum; the Imperial War Museum North in Manchester; the Spiral Extension to the Victoria & Albert Museum; an entertainment and shopping center in Brünnen, Switzerland; and Maurice Wohl Convention Centre.

He recently won the competition for the World Trade Center Ground Zero Site. Daniel is a Professor at the University of Pennsylvania and the Frank O. Gehry Chair at the University of Toronto. His many awards include the Hiroshima Art Prize, the Deutscher Architekturpreis, the Goethe Medaillon and the Berlin Cultural Prize.

Professor Stephen Heppell
Professor Stephen Heppell is director of Ultralab, Anglia Polytechnic University's learning technology research centre. Ultralab is at the heart of the UK's largest projects in ICT and learning: Schools OnLine with the DTI, Tesco SchoolNet 2000, Learning in the New Millennium with Nortel (Europe's longest running Internet learning project), the ÈTui project to invent an intelligent learning toy for 4-8 year olds, the on-line pilot for the University for Industry (with the IPPR), Notschool.net a virtual school for phobics, truants, the excluded and others outside of formal educational institutions, CreativeNet with the Design Council, and many more.

Stephen sits on the DfES Standards Task Force, the DCMS Creative Industries Task Force, the DCMS Internet Policy Committee, the DTI's Foresight 2020 Education Task Force.

He chairs the multimedia jury for the Royal Television Society and sits on both the BAFTA Interactive Entertainments Committee and the DCMS's working committee in Internet policy futures for Cinema, Music, Radio and TV.

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FOREWORD

Welcome to the Review of the inaugural World Creative Forum.

The stated aim of the Forum was to explore the impact of creativity on business and society and it certainly achieved that. This publication aims to draw together some of the most important themes that emerged during that intensive period.

Not surprisingly many similar ideas kept recurring. Delegates heard a lot about passion and also witnessed it as speaker after speaker radiated enthusiasm for their chosen topic. There were other popular words and phrases: magic, diversity, connections, the journey, human spirit – even mystical came up more than once. So, there was plenty of inspiration to be had.

However, where the Forum really scored was in the grounded nature of much of what was discussed. Certainly, there was a lively intellectual atmosphere, but there were also practical tips translatable into action items. Kevin Mitnick, renowned ex-hacker, provided a reminder not to leave trade secrets in the bin by the photocopier, Andy Law, the founder of St Luke's advertising agency, proposed a system for making innovation measurable and ceramicist Nicholas Arroyave-Portela suggested taking your dog for a walk as a way to find inspiration.

The superb quality of the contributions from the six keynote speakers reflected the centrality of the creative impulse at this stage in our history.

The Review summarises the main themes emerging from the Forum, taking as its starting point the keynote sessions, reinforced by comments and input from elsewhere in the Forum.

The human element explores some of the possible consequences of living in a technologically driven society. Baroness Susan Greenfield has a formidable reputation both as a thinker and as a neurologist. If there could ever be such a thing as definition of creativity, she gets closer to it than most. Her thesis - that humanity may be about to undergo a step change in evolution with ramifications for creativity and our very notion of what it means to be human - comes under the microscope.

Only connect examines creative collaboration. What propels the collaborative impulse and where are its limitations? Tim Berners-Lee, who has done more than almost anyone to shape today's world, described how he had intended his invention, the worldwide web, as a creative space from the very start. Can his vision, of shared creativity, ever be implemented?

The new economics takes as its starting point Richard Florida's hugely influential book, 'The Rise of the Creative Class'. Florida has applied his economics training to the question of whether the classic definition of rational decision-making is being supplanted by a more sophisticated notion where individuals make choices based on factors like ethics and quality of life rather than pure financial gain. The power of this idea both for business leaders and for policy makers is hard to overstate.

Physical thinking looks at the artist's role in society. Antony Gormley stressed the fundamental importance of creativity in everyday life. Everyone is an artist he claimed and he issued a direct challenge. Each of us is responsible for finding and nurturing his or her unique artistic sensibility.

Passionate engagement focuses on the personal qualities of highly creative people, specifically courage and conviction. The architect, Daniel Libeskind has a tremendous ability to express powerful ideas forcefully. He is a risk taker, responsible for several ground-breaking projects. His clarity and passion have given him the power to persuade bureaucrats, politicians, developers and financiers to back him.

Learning to discover considers the paradox that, as information gets more accessible, there may be less incentive for people to learn. Professor Stephen Heppell is a revolutionary when it comes to education. He sees many of today's schools as places where ability and, especially, creativity are stifled. He is using digital media to place the power to direct learning in the hands of users, the students themselves.

The World Creative Forum brought together creative people from many different walks of life. It gave them an opportunity to step back, to focus less on the detail of their own specialisms and ideas and to concentrate instead on commonalities, the overall context.

Whether you are concerned with unlocking creativity for others or in yourself, finding that context is critical. For creative thinking is not so much about ideas *per se*, it has far more to do with cultivating a space that can hold those ideas. For the people behind the Forum the aim had always been to foster a shared space for conversation and collaboration. The Review reflects on this endeavour, and takes it forward.

About the Forum

In September 2003, over 90 speakers contributed to two and a half days of panel sessions, debates and keynotes in three theatre spaces at Bloomberg's state-of-the-art, European HQ in the City of London.

Delegates gathered from every corner of the globe. They brought with them a broad range of experiences. Over 30 countries were represented; the people who came had backgrounds in business, education, the creative industries, science, the arts and the public sector.

It was a rich mix. They heard industrialists, management consultants, lawyers and investors on fostering creativity in corporate cultures. Inventors, designers, artists and architects spoke of groundbreaking projects and what had inspired them. Scientists dissected creativity. Educators and policy makers talked about ways to support it. Retailers and cultural commentators debated the implications of change for consumers and society, while technologists and futurists discussed inventions and trends that are shaping our future.

Information Technology and scientific advances are broadening experience, but is the human element being squeezed out of the picture?

THE HUMAN ELEMENT

Technology is changing what it means to be human, says Susan Greenfield, but we need to be alert to the pitfalls.

Addressing the World Creative Forum, Baroness Susan Greenfield suggested that there is a real risk that tomorrow's people will be "silicon clones", a society shoehorned into conformity. From her unique standpoint as a leading neuro-scientist she argued forcefully that we must address this danger head-on if we are not to lose something inherently precious, the thing that makes us human.

It's not that systems are breaking down. Rather, that we risk becoming victims of our own success. Our scientists consistently produce far-reaching results yet, at the same time, our world is being standardised; normalised for the sake of convenience.

Future technologies will alter the way we think and feel. Moore's Law persists, computer power is doubling every eighteen months. Ubiquitously, the infrastructure to sustain accelerating technological development is taking hold. At this rate, within a decade, we will have unimaginable technological power at our fingertips.

Greenfield is no Luddite. She's a card-carrying neuroscientist who acknowledges the richness and promise offered by tomorrow's technologies. So when she counsels caution, she speaks from a position that's informed by an intimate grasp of her subject.

Creativity, for her, "the final apotheosis of what it means to be human, of what it means to be individual", risks being undermined for the sake of efficiency, comfort and scientific progress. There is an urgent need to examine and understand the things that make us human, she said. Unless we do, Western society could be sleepwalking towards catastrophe.

In a technologically augmented reality there is a risk, she argued, that our imaginations will no longer be used.

"In view of the plasticity of the brain, are we going to become, if you like, silicon clones, forget about carbon clones, are we going to have standardised inputs that therefore give us a standardised configuration of connections?"

To help her audience get to grips with her argument she took them on a high-octane romp through neuroscience. She began with an explanation of how human brains operate. "The brain isn't just a sludgy thing, it depends what level you are working at, and lots of people work at different levels ... the issue is how to bring them all together.

"OK, so we start with consciousness. Consciousness: let's just define it as you are going to lose it tonight... then we have what we could call mental functions, that is to say how we talk, how we think and our senses.

"People tend to think that something like vision is a complete whole function of the brain but, surprisingly, your brain, even at this moment, assuming you are still conscious, is dividing me up into my shape, the colour of my clothes and, because I am walking around, the movement... there are at least 30 different brain areas we know about that are responsible for the function, let's say, of vision.

"And these brain regions, which are discernable with the naked eye, are not independent mini brains. There is no such thing as the centre for this or that ... they work together rather like instruments in an orchestra.

"If you pull them apart then you get assemblies, very large assemblies of brain cells, neurones is the technical name for them and the working unit of these circuits of brain cells is the gap between them called a synapse... Operating across the synapse is a chemical called a transmitter which enables a signal to go from one neurone to another, and in order for it to do its job you need a whole load of bio-chemical baggage, let's say proteins, that enable the transmitter to be made, to be released, to shake hands with its target and be removed, and that, finally, is the product of genes."

She pointed out that the thing that distinguishes us from other species is our capacity to learn. Human beings are born with around 100 billion brain cells but there can be up to 100,000 connections on any one cell. In the human brain, it seems, making connections is what it's all about.

"My view of how things work normally is it is like a stone falling in a puddle. That is to say you have something that triggers lots of associations and the assemblies of neurones are like the ripples, transiently pressed into service as your consciousness."

It is through these connections that we acquire knowledge and assign meaning to our experiences. Our brains become less fluid as we

IMAGINE

contextualise experience. As we go through life we personalise our brain, developing so-called hard-wired circuitry.

Greenfield talked of the brain as a "golden jungle" and gave several examples of its adaptive behaviour. She referred to one study of London taxi drivers, whose work requires them to memorise London street names. When their brains were scanned it was found that an area of the brain related to memory was bigger for them than in other people. Another study looking at pianists demonstrated that the brains of people who were asked to imagine playing the piano adapted in similar ways to those who actually did it.

This image of the brain as a golden jungle, with cells invasively establishing vine-like connections to surrounding regions, both illustrates the plasticity of the brain and explains Greenfield's concern about the future.

When the wrong kinds of neural connections get established they can be tough to shift. The tale of one young boy, who was left blind in one eye, is indicative.

Initially, his physicians were perplexed. There seemed to be nothing technically wrong with the non-functioning eye. Then it turned out that at some point during his early childhood the eye had been covered with a bandage, rendering it inactive. Unfortunately this had happened at a critical stage. During that same period the developing connections from his seeing eye had invaded the relevant area of his visual cortex. By the time the bandage was finally removed it was too late, there was no space left for the eye to connect up with the cortex.

'Use it or lose' is the law of the jungle. The boy's personalised circuitry had ossified, it was no longer able to adapt to the new eye. Greenfield pointed out that the same thing can happen to our ways of thinking. We need to maintain fluidity, which is why creativity is central.

Baroness Greenfield's neuroscience take on creativity is that it occurs "whenever two small net arrays combine to create a new, large assembly". In other words, it's what happens when a couple of tiny pebbles dropped in a neural puddle combine to create the ripple effect of a large stone.

If you want to look at creativity one place to start is to focus on these small net arrays. When and where do they happen? The examples offered were helpful, but perhaps not recommended as ways to get your creative juices flowing. Amongst them; being a child, going to raves, dreaming, schizophrenia, tasting a strawberry; with all of these the common index is an unusually small assembly in working brain cells.

Greenfield spoke of human beings requiring varied stimuli and was worried that today's children, who are "children of the screen rather than of the book" would turn out to be answer-rich but question-poor. The google generation will not actually be required to learn anything.

"Imagine that we learn nothing at school because we haven't needed to. I just ask my watch when the Battle of Hastings was and my earrings give me the answer, perhaps even in my own voice."

Current developments indicate that our intimacy with technology may be about to shift up a gear. In the future the body itself will be supplemented through technological means. Nanotechnology will be used to prevent and repair dysfunction, with all the possibilities raised by that for external monitoring and intervention.

Greenfield cited work being done on neural chips, which combine nervous tissue with silicon. Several projects are already in clinical trials. One involves injectible, neuromuscular stimulators that could operate a paralyzed limb and be managed wirelessly. Another is working on a silicon-based array of photo-sensors made on a curved surface that could be fitted to the back of a damaged human retina.

Science and technology are already embedded in everyday life. Tomorrow's citizens will face increasingly challenging decisions about technologies that have the potential to change human society for good and for bad. How we react to that is the issue. Greenfield called for society to steer a middle course, becoming neither technophobes who fear the future nor technophiles who promise the impossible.

"We can't sleepwalk into these technologies, we must be very, very careful about where we want to go and I would say that creativity should be high on our list of things that we want to have in our society."

PLAYING

A world that takes care of all our needs may sound seductive, but is this really what we want?

Technology is removing many of the rough edges of everyday existence. It's no longer far-fetched to imagine an idealised future - a networked world of info-bots, proximity sensors and adaptive applications that respond instantly to our every need.

For designers, inventors, engineers - indeed anyone who concerns themselves with making the world a better place - it can be tempting to believe in the perfectibility of our environment. Architects David Marks and Julia Barfield have been looking at how to make an ideal space for vertical living. The creators of the London Eye now want to build Skyhouse, a city in a skyscraper. One problem they've been grappling with is this: when you provide for everyone's needs, is there a risk that they end up not talking to each other?

So they asked themselves, how do you allow space for camaraderie? One thing they've discovered is it can be good to get people annoyed. The petty aggravations of daily living can be a great bonding agent. So they're building dysfunction into their designs. They are looking at models where, sometimes, the lifts break down, the air conditioning fails or the windows don't open, because it turns out that we like a bit of inconvenience in our daily lives, it suits us better.

Elsewhere David Kester, Head of the UK Design Council introduced the Forum to his two imaginary friends, Davinda and Pete. Davinda plugs into an extended knowledge network. She juggles family, financial, business and research commitments across the Net and is able to act quickly on developments in many different spheres of activity. Pete is a postman. He isn't part of any knowledge network; in fact he never even uses a computer. He does get to spend time with his family, though, and he lives a far less stressful life than Davinda.

There was a consensus that, in practice, the extent to which we can perfect our surroundings is limited and that this is probably a good thing. Andy Law, founder of St. Luke's, suggested that there was too much design in the world; perhaps sometimes we should just let things happen. The typographer, Freda Sack, called for a change in thinking, she suggested that creative practitioners should be more concerned with making space and talk less about objects. Gustav Metzger, the auto-destructive artist, had a more radical proposition. On the final day he suggested from the floor that delegates should take a vote. The motion: 'this Forum believes that design must eat itself'.

NOTES FROM AROUND THE FORUM

Usually, in collaborative projects, each of the partners has a specific role, but shared working is trickier to manage when the nature of the project is still unclear. What does it take to sustain creative collaborations?

ONLY CONNECT

When Tim Berners-Lee invented the WorldWideWeb, he imagined it as a platform for intercreativity. He is still working to achieve that.

Tim Berners-Lee doesn't like to be labelled as the web's creator - he claims simply to have been in the right place at the right time. He is now Director of W3C, the worldwide web consortium, which acts as guardian for the web, promoting interoperability, developing standards and anticipating the novel legal and social issues it raises.

As with so many great inventions his had arisen out of a specific need. He was working as a software engineer at CERN and the particle physicists he was supporting needed a way to view and manage their data collectively. His original idea had been to empower these groups to build things together by providing a virtual space where they could interact.

"I wanted something where people could come in, have a look around, see what was going on, see what they could contribute to it, and then leave, without having to be debriefed, because they've left their mark – they've left their breadcrumbs."

The web has since become ubiquitous. Arguably, though, it still hasn't fulfilled its creative potential, the role he dreamed of for it way back in 1991 when he launched it on an unsuspecting world.

The web is unquestionably effective as a global, shared publishing platform, but when people call it interactive, usually what they mean is that you can use it to fill in HTML forms. Currently, most collaboration across the Internet works that way. It relies on people sending and receiving messages. Virtual team members work separately then meet up on the net for progress reports and updates.

Berners-Lee's vision of collaboration is more fundamental. He wants to see an intercreative web. In the intercreative environment all users would be able to create, edit, add to and annotate shared content.

"When you have a photograph album on the web, for example, it can't be just like a coffee table book. What I'd like is for three people who've been on holiday together, when they're back at their homes, to be able to log on, go to a shared album, drag their photos into it, so that they can all see – then they all move it around – they throw away things they object to: 'My nose looks terrible in that – you don't need to put that in', and they all agree on the photograph album – they all have a good laugh about what a good time they've had, and it's a communal thing – they've created something together."

For his keynote at the World Creative Forum he examined the challenge of intercreativity. As he pointed out, it's not just about providing the right platform, though that's challenging enough, you also have to promote a climate of trust.

For instance, what gives participants the confidence to dive in and alter their colleagues' work? At the technical end, it helps to know that changes are reversible so it's always possible to replay a discussion. Beyond that, though, it depends on mutual understanding and respect.

So, build trust. But even then, how do you get people to share unformed thoughts? After all, if it's about anything, an intercreative space has to allow for that level of collaboration.

"How can we go through this brainstorming so we're not pinning things down, we're letting these half-formed ideas float about. How can we pass a half-formed idea from one person to another? Force them to communicate in poetry? Maybe get them to communicate in a foreign language? How can we stop the ideas gelling before they've floated around, enough for the real nice gem, the really beautiful solution to drop into place in somebody's head?"

Then there's another key element. Somehow these pearls, the fruits of this communal effort, all have to be documented. This is not something that can safely be left to technology, there's too much interpretation involved. Perhaps a scribe is needed?

Then there's the culture question. Strong communities will help people to work together, but whenever you develop a cultural bond you also raise a boundary between the members of that community and everyone else. You need to establish enough of a community so that its members feel involved and to make it possible to achieve the task in hand, but at the same time it needs to be light touch.

When do you let sub-groups emerge from the main discussion? How autonomous should everyone be? How much should they subscribe to a common set of rules/approaches? Negotiating distance is critical when managing intercreativity and Berners-Lee encounters these kinds of issues every day in his role at W3C.

"This is the way it works in our discussions at W3C. It's very much about communities and by no means all technical problems. For instance, should you get your semantic web programmers talking to your business-to-business people? They speak such different languages that it could cloud the issue.

"One of the things we're trying is to set up pairings. Programmers will always work in pairs, either simply acting as sounding boards for each other or sometimes as asymmetric pairs."

At a certain point he had realised that if the web was ever going to develop into a two-way street, where anyone, not just HTML and Java programmers, could edit as well as receive content, different software would be needed. So he decided that it was time for W3C to practice what it preached, to "eat our own dog food".

This led to the open source Amaya project. Amaya was designed as a seamless browser and web page editor with remote access capabilities. The idea was to create an environment that allowed anyone to build rich, web-based content without programming. Using Amaya, anyone can add, edit, delete and annotate content. Groups can create and update web pages collaboratively. It handles text, graphics, it even has an extensive maths capability. It is, in short, an all-singing, all-dancing tool for intercreative collaboration on the web.

Strange, then, that it hasn't really taken off. Could it be that people don't actually want to be creative on the web? Perhaps, but then there are other successes, which appear to demonstrate that people do want to use the web creatively.

COUNTER

Take Blogs, for instance:

"With Amaya you can decorate the page, you can invoke styles, you can create styles – it sounds like Bloggers don't want to do that because, actually, the value of the Blog is in the text. However, they don't want just the text published, which you can do very easily with Amaya. They want to get all the style sheets, and all the indexes and the talk-back buttons, and they want all their Blogs arranged in a nice Blog-like order. They want it to have the look and feel of a Blog, and they don't want to have to work for that."

The Wiki phenomenon is another example. Like Amaya, Wiki web pages are written so that they are updatable. It's a very interesting culture. It relies totally on trust, on peer pressure, not to mess it up. But these are very basic pages, formatting or high-level program interaction are simply not on the agenda for most people.

One conclusion seems to be that Amaya does too much. In practice, people prefer to work within prescribed creative channels. They welcome a format that allows them to do that.

Amaya is, however, freely available and Berners-Lee was sure that open source distribution is the right way for the web to continue to grow and develop. It was getting to the point, he complained, where the number of lawyers in software companies registering patents was outstripping the number of software engineers.

"Every now and again an engineer feels a hand on his shoulder, and hears:

'Hey, have you invented anything good recently?'

'No.'

'What about this? What does it do?'

'Oh, you know, it adds a couple of numbers up and puts them in a box.'

'Ooh, that's good. OK, anybody done that before? Anybody done that before in red, on a machine with an odd number of bytes and storage?'

'umm...'

'Oh, that's good, OK. Do you mind if I write that up?' "

This attitude, he said, was leading to a nuclear arms race between software developers and that was unfortunate. By lodging patent applications for trivial snippets of code software developers run the risk of stymieing future development.

He pointed out that the web would never have grown in the way it has if its pioneers had taken this view.

"I think the Grateful Dead used to have concerts and they used to leave leads hanging out over the stage at the front for people to hook onto tape recorders if they wanted to, to take away a copy of the concert."

As he spoke approvingly of a counterculture based on fair use where sharing was encouraged, it was reassuring to realise that, beneath that sober appearance and modest demeanour, the man is something of a hippie geek.

"So, on the web, using the web for creativity - if you're involved in this, let's make it an intercreative medium. It's going to be more complicated than it was when it started, but let's make sure that the infrastructure is royalty free, because otherwise, the new things on top of it won't grow. The web has always been: 'this is not the end, this is just the foundation for new things.' And that's what it's about, that's what makes it so exciting."

Tim Berners-Lee argued passionately for an open source, royalty-free Internet. In this commercially dominated age his speech was a refreshing corrective.

CULTURE

Group creativity is notoriously difficult to define, let alone bring about. What are the prerequisites?

Are there things that can be done to create the conditions where successful, creative collaboration can thrive?

Most speakers agreed that this is something that cannot be forced. For many, there was a feeling that the very best collaborations arise out of deep-rooted personal relationships.

Rajeev Sethi and Zandra Rhodes have been friends for over twenty years. In that time they have built collaborative partnerships with many local craftspeople in rural India. Somehow, they instinctively know how to connect with them. Sethi gives Rhodes a lot of credit, "she's a great humanist, she belongs to the World". Zandra's view: "it helps to have pink hair".

Together, they've managed to bridge two very different cultures. The fruits of that collaboration are now sold internationally. Everyone has benefited.

For Andrew Warren, building a common ethos is the key to facilitating collaboration. As a management consultant his work brings him into contact with all kinds of corporate culture. There are big, interesting and creative businesses around, he said, invariably, what they have in common is that the people in them share values, the businesses they work in have clear, agreed objectives.

Whether it's based on friendship, pink hair or a mission statement, collaboration always stems from connectivity. That connector can be a person, a shared purpose, but it can also be a time and a place.

Will Alsop and Bruce McLean are friends of long-standing. Most summers, they spend time at McLean's house in Minorca, working through ideas. Says McClean:

"I don't expect to get anything from anything. But of course if you don't expect anything you usually get something. That is what I find. I just like to mess around with people I like. We worked together last year. Something came out of it. I found a new way to make sculpture."

Alsop also felt that this 'messing around' was an undervalued activity. For him having space to play and to dream invigorates his practice.

The two recalled how they had first met. They paid tribute to David Goddard, formerly deputy director at Riverside Studios, who had the courage to offer studio space to a number of people who interested him artistically. There were no strings attached and no outcomes were expected.

Along with Alsop and McClean were Michael Nyman, Peter Greenaway, Thadeusz Kantor, Michael Clarke and many others. There weren't any rules, but certain traditions did establish themselves. For instance, every evening at 6 o'clock the bar became a debating centre.

The people there were not actively producing anything, they were just messing around. At the same time there was a strong sense amongst them of an invisible, osmotic exchange. Friendships were formed; it became a vibrant, collaborative space.

The friendships formed during this period have stood the test of time. For Alsop and McLean, certainly, the collaborative ethos at the Riverside has influenced the way their practices have developed in the years since.

NOTES FROM AROUND THE FORUM

Traditionally, employees have been motivated extrinsically, by money and security. What are the economic implications of the emerging class of creative workers who are intrinsically motivated by what they do and where they live rather than what they earn?

THE NEW ECONOMICS

BOHEMIAN

Richard Florida told the Forum how a new perspective on living and working is fuelling the creative economy.

The prospect of a radical shift, from an economy dominated by manufacturing and services and governed by the conventional laws of economic development, to a creative economy capable of being measured on an index of bohemian activity, presents many challenges.

For cities, regions and countries competing to attract jobs and investment, a key imperative is to rethink the places where people live and work to accommodate what Richard Florida, Heinz Professor of Regional Economic Development at Carnegie Mellon University, calls "a sea-change in people's choices and attitudes".

American academic Florida is the author of the best-selling book, 'The Rise of the Creative Class'. In it he describes how the creative ethos is starting to dominate in much the same way that William Whyte's 1956 classic, 'The Organisation Man', showed how the organisational ethos of that age permeated every aspect of life.

Speaking at the World Creative Forum, Florida explained that as the organisation man gives way to the creative class, where you live is becoming more important than the job you do:

"One of the questions we asked in writing the book was: why did you choose this place to live and work? People were not picking companies any more, like in the old days: 'I'm an IBM man'; 'I'm a BMW man'; 'I'm a company man; a GE man; a Toyota man.' No more: people across many countries, not just my own, were picking specific cities to live in because they knew the job would be going away. The place provided constancy, it provided a community.

"They told us: 'We will not move for a job. We move to a city or a community that has lots of jobs.' It echoes that old adage in the Bay area of California, where you can change your job without changing your parking space.

"Place becomes the aggregator of labour market activity, solving the chicken and egg problem: what comes first, the jobs or the people – place brings the jobs and the people together."

Florida shaped many of his ideas in response to a spell serving on the Economic Advisory Board to the Governor in his home state of Pennsylvania. Local politicians were perplexed by a shortage of young people going into the factory machine shops as apprentices.

Instead they preferred jobs in hair salons, spas and beauty parlours which paid less, offered fewer benefits and less security. Florida parodied the Governor's lament: 'Big problem! Everybody's cutting hair and doing waxing and make-up and massage – nobody's making the stuff that made our state great!'

Florida knew what it all meant. His own students told him that the hair salon represented a more creative line of work - a chance to build your own clientele and maybe start your own business - than the punch-clock routine of a machine tool apprenticeship. Young people entering the workforce in Pennsylvania - "the place that invented modern electrical appliances with Westinghouse, modern electric power distribution and other advances in power distribution, locomotive engines, switches and signals, aluminium and plate glass" - were no longer extrinsically motivated.

Their decision to choose the hair salon was part of a rise in creative work that Florida now claims accounts, in wages paid, for 50 per cent of the US economy. That is equal to manufacturing and services combined.

Florida is careful to define his creative class not as an elite but in terms of accessing the creative potential inside everyone. Indeed his definition of what constitutes the creative industries is extraordinarily broad and not confined to the usual high-tech, high-growth suspects - software, biotech, IT, multimedia, virtual reality:

"Creativity is the driving force in every segment of industrial or business life. Everything we use, everything we do, every service we procure, even everything we eat has a creative component.

"In the old world, economic growth came from the places that had natural resources or raw materials – coal, iron ore, petroleum. Or they had access to transportation, or they had large markets, or they could amass large factory complexes that could harness physical labour.

"None of those things are as relevant today – because virtually anyone can have access to them. The key to the successful and competitive region, organisation or nation is the creative value added."

To underline his point, Florida movingly recalled how his father Lewis worked as a foreman in the New Jersey eyewear factory,

Victory Optical, making heavy black spectacles of the type made popular by Buddy Holly and Elvis Costello. Florida senior would take his young son on a Saturday to see the factory in action but would remind him: "It's not the machines, it's not the technology or the factory that make this place great. It's the knowledge, the intelligence and the creativity of the people who work here: that's the key."

Florida then whipped out his own contemporary eyewear, an expensive and stylish Belgian make which costs up to a hundred times more than Victory Optical's product depending on where you buy it:

"Where is the value added in this pair of eyeglasses? The things are featherweight, there's far less material than my dad's glasses. I can't see any better – they don't magically correct my vision any better.

"My dad's factory was filled with people – this is a highly automated production process – there's less material, there's less physical labour, and there's no more utilitarian value in this. What in the hell is this idiot paying this money for? Well, you know the answer, it's the design, it's the aesthetic, it's the creative content in this eyewear."

Florida's penchant for costly eyewear or other creatively assembled artefacts has persuaded him that "for the first time in industrial history, our intellectual labour, our mental content, our creative capacities have become the most central part of the value we add to modern economies". But companies can no longer rely on creative people - "the only real economic asset we have" - simply chasing the jobs wherever they might be located. "If you're a company leader, you have to locate that company in a place that has territorial or jurisdictional advantage."

That equates to making cities and regions more dynamic places in which to live and work. Florida's research revealed what that means in practice. Here he quoted Hewlett Packard's CEO Carly Fiorina: "Governors, keep your tax breaks, keep those roadway interchanges, we don't care about those giant stadiums you all think we want. When we make a decision about where to put one of our company factories or research and development units or laboratories or offices; we only have one criterion in mind – we go where the highly skilled and creative people are. End of story."

And where the highly skilled and creative people are usually depends on the type of place. Does it have a "just in time culture" of artists, street level cafes, world music and extreme sports? Is it ethnically diverse and with a gay community? Are there lots of restaurants, nightclubs, theatres and tattoo parlours? Is there always lots happening?

Florida has devised a "bohemian index" to measure these indicators, rewriting the rules of economic development in the process. He cross-referenced his research against a colleague's study of the economic impact of gays and discovered that the five high-tech hotspots in the US - San Francisco, Boston, Seattle, Austin and Washington DC - were also the cities with the five largest gay communities in America.

Florida's thesis has garnered eye-catching newspaper headlines like 'Why gays in rock bands matter to your economy' and there is no doubt that 'The Rise of the Creative Class' has caught the imagination of corporate and civic leaders across the industrial world. Nevertheless its author told the World Creative Forum that, as yet, there is no magic formula for success:

"We are in the infancy of this age – we are still groping in the dark. We don't know the answers: there is no magic bullet how to make your company or your community a magnet – we are in the process of constructing that."

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What can civic planners and business leaders do to attract and motivate the creative class?

If Florida is right about the emergence of a new creative class, then fostering conditions where creativity can thrive becomes an economic imperative for business leaders and civic planners alike.

It was appropriate that the 2003 World Creative Forum should take place in Bloomberg's stunning European headquarters. Chief Executive, Lex Fenwick, emphasised that there were sound business reasons for the care that had been lavished on the premises. Bloomberg has an explicit policy of surrounding its employees with "weird and strange things". Fenwick was convinced that this made for a more dynamic, a more creative and therefore more profitable, corporate culture.

People, nowadays, want more than mere utility from the places where they live and work. Retailing icon, Terence Conran praised one architectural response to this, Birmingham's Bull Ring development. In particular, he mentioned the Selfridges building, which looks like a spaceship that's landed in the city centre, but is acting as a beacon for Birmingham.

No matter where you go, planners in the world's thriving cities are paying close attention to the richness of cultural experience. They realise that local people are keenly aware of what is happening in the rest of the world and, far more mobile than they used to be, are much more likely to relocate if they don't like their surroundings. Of course cultural richness won't just happen through architecture. More than anything, it's a function of the energy of a city's inhabitants. Michael Frye who chairs London's Creative Industries Commission identified diversity as a key driver for creativity. For many urban environments, it is the immigrant populations and the shifting, nomadic communities that add dynamism and context. Frye liked Theodore Zeldin's idea that a city's function is to provide a place where different people in differing circumstances meet up and interact. Out of this clustering come new ideas and ways of doing things.

Professor Richard Sennett endorsed the value of the idea of 'the creative city', but noted that it is mostly the creative 'upper middle class' that benefits. As someone who lived for many years in Greenwich Village he has seen what can happen in a diverse community. The Village, with its Italian, Jewish and gay populations has always been a space of diversity. But, whereas, when he arrived in 1970, there was an atmosphere of safety and tolerance between the various communities, harsh economic conditions have contributed to this being supplanted by a climate of mutual suspicion and fear.

Corporate cultures can also come unstuck when the going gets tough, he gave the example of IBM during its downsizing phase. His conclusion: trust and mutual respect are the cultural glue, without them creative interventions will have no meaningful impact.

NOTES FROM AROUND THE FORUM

Artists can play a leading role as cultural explorers and challengers of existing orthodoxies. Should this be harnessed and if so how?

PHYSICAL THINKING

Antony Gormley on the role of the artist and of art in general in helping to shape the future.

Antony Gormley is one of the UK's leading public artists, and a tireless advocate of an expanded social role for art. He spoke of taking art away from the galleries and museums, the places "where these fruits of the mind are kept apart", and bringing it back into the real world.

In 1994, when he won the Turner prize, he was known for work that dealt obsessively with the self. His own body was both the subject and the raw material for almost every sculpture he made. So what could such an artist have to say about the social realm?

A good deal, as it turned out. Just look at his recent output, works like *Field, Allotment, Domain Field* - a highly specific vision of collaboration permeates all of them, both in the meaning they convey and in the way they are made.

At the Forum, Gormley presented his vision of an expanded, participative creativity that incorporates all aspects of existence. He called for art that was inclusive, rooted in community, and which expressed itself through process. Were he still with us, Joseph Beuys would surely be nodding his agreement in that trademark felt hat of his.

Beuys, of course, was one of the first artists to talk about extending human creativity. He coined the term 'social sculpture' for the more broadly defined 'art' that this implied. This social sculpture - by which he meant the shaping not just of physical materials but also of attitudes, institutions etc. - was to be accomplished co-operatively, creatively and across all disciplines.

Gormley's own take on the meaning and function of art reveals a very Beuysian outlook. He happily acknowledges the debt. He totally agrees with the famous slogan that 'everyone is an artist' and believes passionately that creativity and, specifically, art should have a pivotal role in helping to shape the future.

"It used to be that an artist was considered a special kind of person. But this is not - perhaps it never has been - the case. On the contrary, every person is a special kind of artist."

Gormley began by talking about his most recognisable work, *Angel of the North*. Public monuments are notoriously difficult to pull off successfully in this day and age, but it's fair to say that the local residents have enthusiastically adopted the Angel. At one point it was even adorned with the number 9 shirt of Newcastle's footballing hero, Alan Shearer.

"The Angel – what did we have? We had £110,000 to make this work that eventually cost well over ten times that amount. It was simply the fact that actually one thing led to another. I said 'I don't make work for motorways', and they said 'come up and see the site', so I said 'okay'. I went up and once I had seen the site, this extraordinary sort of lump, this mound by the motorway I got hooked. I went up with one of the councillors and they said 'can you make something' and I said, 'well it is going to have to be big'. And so it went on, and it was through conversations, sharing, you know, let's scratch that itch but let's do it together.

"The other extraordinary thing about this organic, creative model is that through communicating an idea a door opens and it is not just the artist that can walk through it.

"If you open the studio door and jettison that idea of the artist as the isolated, unique individual, it is actually possible to make things today in the same way that art has always been made, to be in the shared parts of the world."

Many of his projects have adopted this principle of organic creativity. He has been adept at finding new forms of dialogue, which allow his work to develop both formally and conceptually. He explores terrain where the role of the artist, the role of community, the nature of collaboration are all explicitly at stake.

"I think what I am trying to do is say can we make art, contemporary art that can stand, in a way, the scrutiny that you would apply to a Picasso, or a Brancusi? But can we make that collectively?"

His pursuit of a collective aesthetic has led to works like *Field,* an ongoing project to which he has been committed since 1990. He works with local communities to produce vast installations of individual, hand-crafted figures. Versions of *Field* have been made in Mexico, Merseyside, the Amazon basin and in Sweden. The latest, *Asian Field*, made with 350 people in China over an intense five-day period, is also the most ambitious, comprising some 190,000 kiln-fired, terracotta figures.

Each time he remakes *Field*, he enlists hundreds of people, provides several tons of clay and gives them a couple of basic making instructions.

"They have to be hand sized, they have to more or less stand up and they have to have eyes. Those are the rules: from that point onwards it is up to you."

The installations that result from this process, these vast clay populations, refer to a collective body and relate back to the collaborative ethos, which brought them about.

Gormley has always been concerned with the body as a physical entity so it was natural that he should seek out ways to give that collective body a physical presence. This, he suggested, was one of the triggers for *Allotment*.

"I wanted to see if I could evolve a model of making that in some way wasn't by inference connected to a collective body, but actually was intimately connected with it."

He advertised on local radio in Malmo, Sweden for 300 people who would allow him to take precise measurements of their bodies. Working from each volunteer's details he constructed an individual, block-like, body-sized, concrete building. Apertures were drilled where the mouth, the anus, the genitals would have been.

"Together, these works were then laid out as a virtual city, which has 2 avenues and 4 cross streets, so about 15 blocks with about 20 pieces in each block."

The resulting installation is a powerful evocation of loss and the alienation of urban living.

Field and *Allotment* could be seen as radical departures from his earlier work, which was based largely on his own body. But there is, in

fact, continuity here. For Gormley's work has always tried to deal with what is shared.

The body, for him, is an inflexion point. He wants us to see it, not as a vessel, but as the place where subjectivity and the real world come into contact. As he puts it, "we all live at the other side of our appearances, so my face belongs to you and your face belongs to me at this moment."

When he talks about art, he means it as a verb. Art doesn't exist within the object, it depends also on the experiencer. His account of how art operates raises the status of the viewer to that of an active participant.

"I make art but so do all of you. Creativity is a shared experience, not only, as it were, in these collective projects like the Angel but it is a shared experience in terms of its consumption.

"The artist proposes but the viewer and the beholder's share in accepting that proposition and giving it meaning is probably the most important creative act of the two. In a sense that idea of shared creativity exists within the communication. It could be an idea, it could be a song, it could be just a moment or it could be an object."

So art is an encounter. Sculpture, indeed any art form, is only art so long as it is affective. For him, art is like a lump of psychic gristle that rubs up against, sometimes gnaws away at, our preconceptions.

In *Domain Field* at the Baltic in 2003 the propositions that creativity is shared and that art is expressed through process, were made explicit. This piece involved taking full body casts of volunteers. Some 300 people agreed to participate in a gruelling, two-hour process.

"You were measured, invited to take all your clothes off, covered in cling film and a full body cast was made in two goes."

All of this took place in a public space in full sight of a constantly occupied, viewing balcony on the floor above. Over 300,000 people saw the work.

Gormley employed a team of welders who assembled random matrices of stainless steel rods to construct 'domains' out of the resulting moulds.

When installed these became *Domain Field* but the artist acknowledged that the piece was "not just the work, but also the experience of the work".

Arguably, in fact, the actual installation was only the coda; the real artwork had existed earlier during the public, collaborative, construction phase.

"I think that what I thought originally I was doing was making an image, a kind of indexical image of a community. In fact, that wasn't what I was doing. I was making a community."

He describes what he does as a kind of physical thinking. As an artist, he is always looking for ways to make the familiar seem strange. But one extraordinary thing about making anything, he says, is that whatever you change also changes you.

This explains the almost evangelical enthusiasm with which Gormley does what he does. For him, what gives art its power is its capacity to change the way we view the world, and ourselves in it. As he says, "the most important thing is that we are all involved in the making of the future."

When you consider the number of lives that have been changed by his work, whether as beholder, collaborator or as raw material, there can be no doubt that Antony Gormley is playing a full part in shaping that future.

MATERIAL

Bodily interaction with physical things is a very direct way to find out about the world and our place in it.

As anyone who works with physical objects knows, materials impose their own logic.

Apt then that when Iain Sinclair presented his "alchemical retort" to our brand-saturated, meaning-stripped culture it was in physical form: a fig he'd picked up from a tree that overgrows William Blake's grave. He called on city dwellers to re-connect with the world of the physical. "I think in walking in the city is where you will recover your identity."

Few activities are engaged as directly with the physical world as moulding clay at a potter's wheel. The ceramicist, Nicholas Arroyave-Portela creates finely thrown, distorted forms that express qualities of fluidity and containment. Sinclair would not be surprised to learn that he had deliberately decided to locate his studio location so that he would walk an hour every day to get there.

Most of us are spending more time in digitised realms. Whether it's on the phone, the Internet or watching TV we are becoming dissociated from the real world around us. As Richard Seymour pointed out the things we used to call physical are disappearing, they've become meta-products; it's digital equivalence. Next time you are holding your mobile phone, just ask yourself, how much of that product is actually in your hand?

More than one speaker at the Forum complained that computers, despite their huge advantages, were corroding our sense of physical connectedness. The garden designer, Dan Pearson, for instance, longs to drive bulldozers and handle plants, but it's a constant struggle for him - he spends most of his time manipulating 3D graphics.

Vince Frost is a hands-on designer. He showed a film he'd made of one of his magazines being printed and enthused about the smell of the ink, the noise of the binding machines. As he said, "spreads in a presentation look very flat. In reality the human interaction with the magazine is what it's all about."

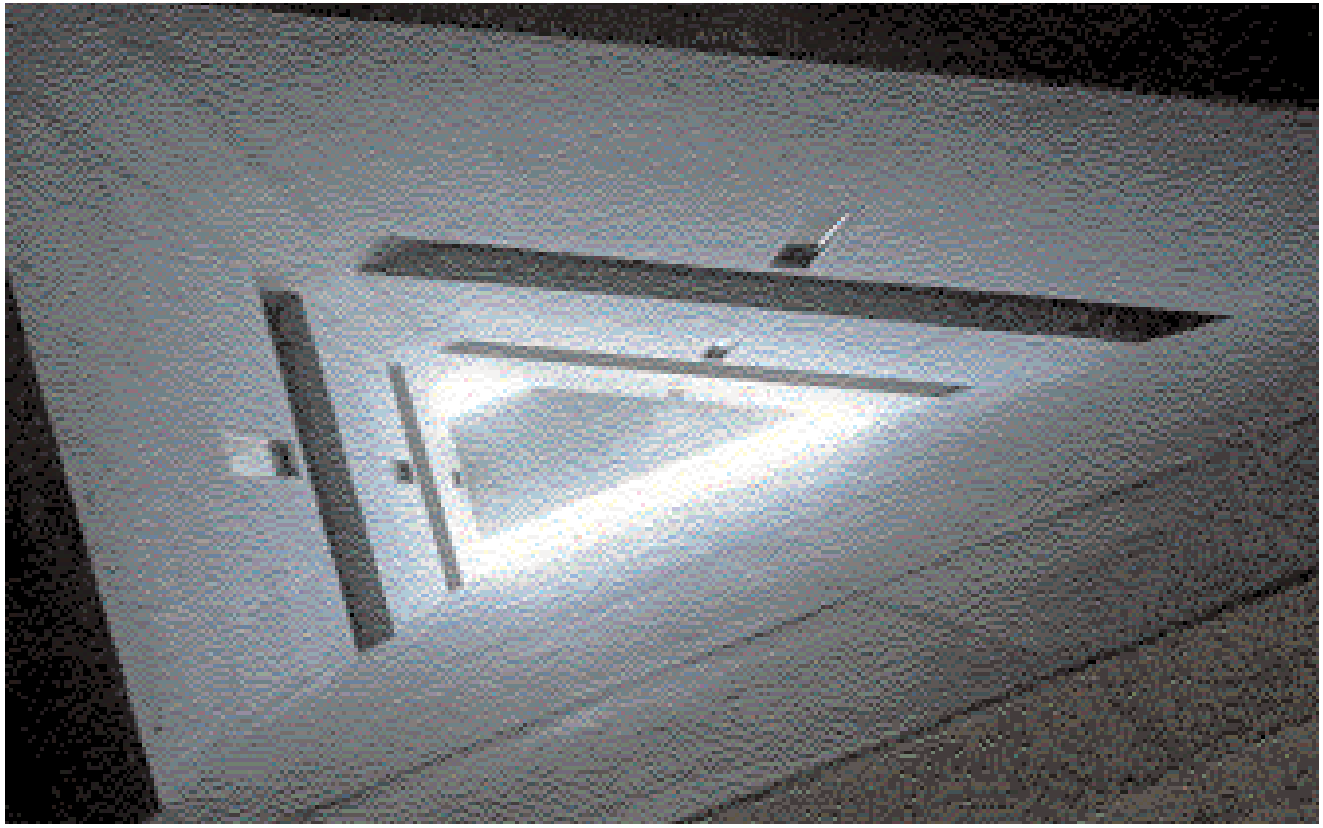
For others, de-materialisation is to be welcomed. James Lingwood described how his agency, Artangel, had helped the artist, Michael Landy, catalogue and destroy each of his possessions - there were 7,227 in all – everything from his CD collection to his Saab car (this, with the able assistance of a Buddhist mechanic).

Technology is never going to disappear, but if we carry on developing digital capabilities, which replace our physical engagement with the world then something else very precious may be lost.

We should perhaps be paying attention to those technologies that combine digital and physical experiences in novel ways. The ones out there right now - things like robot pets, wearable computers, location-aware communication devices - are all incredibly primitive.

One day, maybe, this is where the more sophisticated technological evolutions will occur. In the meantime, there is no substitute for feeling the wind on your face, because physical things matter.

NOTES FROM AROUND THE FORUM



If you want the change you're championing to become a reality, you're going to have to help other people come round to your way of thinking.

PASSIONATE ENGAGEMENT

IRRESISTIBLE

Daniel Libeskind told the Forum how an electrical embryo gave birth to his Jewish Museum.

Overcoming the bureaucratic world and dealing with the barriers it puts up is a recurring challenge for creative people. Entrenched interests are powerful. It's a racing certainty that, at some point, any truly novel idea will come into conflict with the status quo.

So how do you build up an irresistible momentum for change? At the World Creative Forum Daniel Libeskind shared some fascinating insights drawn from his experience.

Libeskind is no stranger to the politics of persuasion. In March 2003, his compelling vision for the World Trade Centre development and his sensitivity to its unique significance won over, not just the selection panel, but many New Yorkers. As a result he was named lead architect for the Ground Zero site. At the Forum he stressed the importance of forging a real connection.

"Every project, curiously enough, unless you are really a lucky architect, depends on a second or two or three of true communication. If it is something really creative, something new, you have to make some sort of a breakthrough on every level."

A key episode from his early career demonstrated why passion and advocacy are priceless assets. He recounted the tale of his first major public commission, the Jewish Museum in Berlin. This striking building is widely seen as a triumph. It draws praise and admiration from public and professionals alike, but it was nearly never built.

Shortly after he won the competition to construct the museum, so the story goes, Berlin held municipal elections. As a result there was a change of administration and the city's new government began a review of its inherited capital programme.

It set about the task with gusto and it was soon plain that the governing Senators had no intention of being constrained by their predecessors' commitments.

It happened that Libeskind's winning design, having just recently been approved, was in the firing line. The Senator responsible for buildings and culture organised a high profile media event and summoned him to attend.

"He said 'I would like you to show me the project but I also want to see the 49 other top entries to this competition'. It was clear that he was about to say goodbye, I am going to choose something else.

"He came into the room with a whole group of cameras and he hardly greeted me, he just went straight over to the model and looked at me and said 'what qualifies you to build this building, what big buildings did you build before?'

"I was a little astonished at the question, I couldn't think of what to answer. Then he repeated it again in an even louder voice, 'what big buildings have you done in your past that qualify you to do this building in Berlin?'

"I said, 'Senator it is not about the size of buildings' and he said 'what big buildings did you do before in your past?' I said to him, 'you know Senator if you judge a project by its past then Berlin is not going to have any future.'

"So he stopped for a minute. Something came into his mind that was not expected and then he turned to the model and he looked at it and it was a very strange form, never seen before, and he said, 'okay, how do I get into this building?'

"I said, 'for you, Senator, there is no door to this museum'. He looked at me totally astonished and I said, 'because there is no door to Jewish history in that sense'. And he looked at the model again and he became interested and then we began to discuss what architecture could possibly be and then he had a complete change of attitude and began to be interested in the project.

"Then of course after a few seconds he extended his arm and said, 'Mr Libeskind, I really want you to build this building.'"

Certainly, Libeskind's intimate relationship to this particular project had helped him. For the Jewish Museum, there was always, he claimed, a feeling that he was not so much being called upon to research a project and design a building as to give physical expression to his own life history.

As someone born just after the war, only a few hundred kilometres away, in Soviet dominated Poland, and having lost most of his family during the holocaust, he had felt personally implicated from the very beginning.

This personal connection can only have strengthened his proposal, but it probably still would have come to nothing had he not been able to articulate his feelings about the building so forcefully. Here was a case where, by wrong-footing his critic, he managed to alter the terms of the discourse and focus attention on why he felt his proposal was the right one.

The Berlin story is a great example of the persuasive power of passion and conviction. Of course it also helps enormously if the concept you're putting forward somehow exceeds people's expectations. Great ideas often sell themselves.

Libeskind suggested, though, that these two things probably go hand in hand. A really strong idea, he said, usually contains some kind of 'electrical embryo', an innate energy that frees it from existing constraints and allows it, like a lightning bolt, to make sudden, vivid and unexpected connections.

"There has to be something that connects to some other dimension of the real world. It might not even be exclusively about design or about form or about function - those parameters that we often deal with as designers. I guess I am speaking about a dimension that is not very obvious, but if it is there, one has a chance - not that it is a guarantee or insurance, but at least, I think, it is a chance - to illuminate a discourse."

Libeskind has a talent for illuminating discourse. It's been integral to the growth of his burgeoning - now hugely influential - practice. Architecture, for him, is about far more than just buildings.

"Kofi Annan talks about the architecture of peace. In fact, the metaphors we have to describe almost anything we do are rooted in the experience of space, and orientation. The words: ground; being grounded; horizon. All these

things. So, in a certain sense, architecture is not just the narrow discipline of building buildings, it is a much broader engagement."

In his extended concept of architecture, buildings are not to be seen as mute, functional backdrops. Instead the experience of architecture should be aiming for nothing less than the liberation of space. To his way of thinking, it is the task of architecture to map human knowledge in ways that open up different spaces and new possibilities.

"We often forget what architecture is for, why it is being built. It is not a zoological space, architecture. Often people reduce it to shelter, something to take us away from the cold and put a roof on top of our heads. That is certainly not true ethnographically or anthropologically; people never gravitated to caves in order to hide from the rain. People lived outside and used those places."

He sees himself as a maker of physical metaphors; places that reflect our desires and wishes in concrete form and is, therefore, acutely conscious of our need to connect with architecture at a personal level.

Libeskind, himself, began his creative life as a professional musician and this has clearly informed his practice. For instance, an architectural response to the Schönberg opera, 'Moses and Aaron', formed part of his scheme for the Jewish museum. He even tested the acoustic properties of the building by playing a scale model of it as if it were a musical instrument.

I see architecture as an instrument, but it is also a musical instrument. One often forgets the sense of balance is in the ear and not in the eye. Acoustical space is a tremendous challenge to develop in any building but particularly buildings that have a public and civic role in a city and have to do with memory.

By the time he was six, he was already performing in public. He spoke about how that experience had taught him the importance of precision.

"You cannot really stand in front of an audience playing music approximately. You can do things approximately in other disciplines but certainly not in music, you cannot approximately play correctly, you can either play or not, well or poorly."

He is unashamedly intellectual in his approach. His buildings are complex, multi-layered constructions, but what makes them outstanding is the consummate sense of balance in their composition.

Daniel Libeskind is astonishingly accomplished and highly articulate. He has a clear sense of what architecture can mean. He also comes across as a man with a passionate commitment to what he does and that, more than anything, is what makes him so persuasive.

MOMENTUM

You may have a vision of the way things ought to be; but are you a visionary or are you just a dreamer?

Do you have what it takes to shape the world you want to see; are you prepared to make it happen? If what you're planning is in any way radical, you can bet your bottom dollar that you're going to have to fight for it.

You'll need to be tough, determined and totally committed.

Camila Batmanghelidjh is in that category. She's raised the caring profession to an art form. In her work with marginalised young people she helps them to see that "a state of emotional excellence can be achieved from the tiniest thing". She explains her vocation with great precision: "nobody ever really talks about the creativity of care giving. Whereas I think actually the really interesting thing is that in the reciprocity of care, the exchange of care, there is an incredible creativity that takes place."

Elsewhere Richard Seymour showed the Forum a powerful film about homeless people in London made by another remarkable individual, Thomas O'Dwyer. The film became required viewing in Tony Blair's office and may even have influenced policy. O'Dwyer, unfortunately, couldn't attend the Forum himself; he's only nine, he had to be in school that day.

Seymour describes himself as an "optimistic futurist". It's fashionable, he said, to view the future as a grim concoction of "extinction, genetically modified sausage rolls and a million forms of floating anxiety". But as he pointed out, it's not just O'Dwyer, "the future is in the hands of some very, very interesting people, some of whom aren't even born yet."

Melanie Howard's mission in life is to help us to get to grips with that future. As co-founder of the Future Foundation, she deals with the very long term. BNFL is one of her clients, it has radioactive waste with a 350,000-year half-life. Go back in history that far and homo sapiens hadn't even begun yet. Slowly, inexorably, she's pushing sustainability up the agenda.

Thomas Heatherwick was also thinking long term. He talked about how he was enjoying having time to develop a temple in Japan. His clients, Buddhist monks, didn't mind which lifetime the project was completed in. Heatherwick's projects involve tens or hundreds of people and the most stimulating part of his job, he felt, was not the ideas so much but the process of galvanising others to bring them about.

We need more of these kinds of people and we need to be more like them. As Seymour said, "we make our own future, it isn't something that just happens to us. It's a self-fulfilling prophecy."

NOTES FROM AROUND THE FORUM

Digital technologies offer unprecedented potential to enhance learning for young people and build a creative society, but traditional models of assessment are thwarting those objectives.

LEARNING TO DISCOVER

INGENIOUS

Stephen Heppel advocates digital learning tools that put control in the hands of students.

In an economically competitive world, where governments are actively writing creativity into the school curriculum and supporting that aspiration with digital investment, can we afford to rely on old, hierarchical structures of learning?

Or should we instead be opening up to dynamic new ways in which young people can interact with different subjects?

Speaking at the World Creative Forum, Professor Stephen Heppell left nobody in any doubt that the creative educational opportunities afforded by digital technology need to be taken up before it is too late. He cited Singapore and China as really grasping the economic importance of the issue and suggested that real engagement would put our current school, university and examination systems on trial.

As Director of Ultralab, which specialises in e-learning research, Heppell has been described by The Times as 'the man who is single-handedly doing more than any other to enlighten government thinking on the use of computers in schools'. He presented a series of Ultralab projects that demonstrated his fundamental belief that "if you give kids great tools, they do extraordinary things".

Heppell's two labs in Chelmsford, England, and Christchurch, New Zealand, have been running a series of experiments in creative learning that have produced astonishing results. "I am comfortable to say here," he told the Forum," that we have never given anything to a 10-year-old or a 12-year-old or a 14-year-old other than they have exceeded our best expectations. It doesn't matter how big a task we challenge them to do - they do better."

At an Ultralab summer school, young pupils storyboarded, shot and edited digital video pieces of such ingenuity and sophistication that one of their teachers told Heppell that the work was better than his own degree-level projects. But when these young pioneers move forward to encounter the universities or employers, they smack right into the buffers of an outdated assessment system:

"We went out with the Financial Times and surveyed UK universities to see how well they responded to the incoming capability of these creative kids.

"They came storming through the door at university absolutely confident in their ability with digital media, with audio, with a whole range of other things, and what happens is they are asked to write a 2,000-word essay or sit down in a room for three hours with a pen.

"Of course, substantial numbers of them fall out of university at the first hurdle because the university is expecting them to succeed in something which was maybe appropriate – I doubt it was - in 1950 but it certainly isn't appropriate now."

The FT asked Ultralab to rank universities into a league table of institutions taking most advantage of the new digital capabilities. Heppell found it impossible to do so because the picture was so uniformly appalling. He contrasted that with the creative inclinations of the students themselves: "You give anybody an opportunity and they take it. There is a group of undergraduate students who love the game Tetris so much that they rewired their student halls to be able to play Tetris with the room lights."

The point about digital technology is that education can directly involve the people in faraway lands you are learning about. Heppell explained how an online community was built so that children in Africa and Afghanistan could compare their journeys to school:

"In Afghanistan, it is really get your head down and run like hell - very similar to West London, really. Very comparable. In Africa it is just a very long way to walk. ...suddenly they are opening up a window on each other's world and can't wait to look for exploratory, creative things."

In another Ultralab project in New Zealand, children participated in creating a new school environment on the third floor of a department store. They worked with the shopfitters to specify how the school should function and what it should contain. You enter the school up an escalator and see, among other things, an electronic whiteboard, a punch ball, a table tennis table, a football machine and a cluster of sofas. "The kids in it were massively motivated, it was their school, they had built it, they had created it, they had thought of all the new ideas," Heppell told his audience. "The total life of that building is two years as a school and it will go back to being a shop after that."

But if there is an eager generation of independent, collaborative young minds coming through, who are already harnessing creativity in their digital media, their learning and their gaming lives, what's to stop them? Heppell's view is that there are still a lot of doors to kick down.

Given a blank sheet of paper to look at assessment by Orange and the UK government's Qualification and Curriculum Authority, Ultralab looked at alternatives to exams. In an experiment, pupils were asked to set their own targets and milestones for learning. In every case, those targets appeared over-ambitious at the outset but were ultimately met without any problem.

Heppell's point is that if we go with the flow of children's creativity in their learning instead of constraining it by our inability to be able to measure and quantify it, there can be real progress. Nothing demonstrates this better than the NotSchool.net project, a virtual school for kids who have been excluded from school. The children are based on computers at home; participative, two-way learning is facilitated by experts all over the UK. They are also given undergraduates at university to be their online buddies.

Heppell told the story of one boy who worked online with a session musician and quickly learnt to play the saxophone to a very high standard. Other problem kids who had been excluded from school excelled in subjects they'd identified as valuable and worth pursuing. Importantly, they went at their own speed, which was often faster than the timetable laid down by the examination system.

Heppell is a great believer in what he calls

user-generated content in learning: "You can harness that creativity to really build powerful learning experiences without having to spend vast amounts of money on content." He explained how local people in Chelmsford were coming to his lab to script a TV soap opera that they would then act out in front of CCTV cameras in the streets. He also described how a concept like Newton's Third Law could be understood through the act of making a digital video of a big girl on roller blades crashing into a little girl on roller blades.

Around the world, who is making fastest progress in terms of harnessing creativity in learning? Heppell outlined a simple recipe for success. He specified the need for states or regions to have less than five million people, a stable minister of education who has been there for a long time, and a very confident culture in relation to the new economy. "New Zealand, Estonia, Catalan Spain, Finland...you can spot them around the world like meteorites at the moment. They will be the people who pull the rest forward."

Heppell ended with a reminder that some of the most significant and ingenious contributors to the creative industries are profoundly dyslexic. "It helps them enormously to be able to see the whole picture, not be trapped in a kind of notation linearity, to have a fresh way to look at things." This in itself was another indictment of the way we've structured society to close down creative opportunities:

"What we have to do is really open our hearts, our minds, our structures and our systems to allow the creativity through. The evidence from the lab is that it is there in spades, but the evidence from experience and from life is that there are some pretty narrow corridors we build for that creativity to run down."

CONTRIBUTORS

In an information-rich society facts are close at hand, but young people still need to learn how to find things out for themselves.

Never before has information been so ubiquitous. At the World Creative Forum, Marissa Mayer, the designer responsible for the Google interface, used a 2000 study by the School of Information and Management Sciences at Berkeley to highlight this point. Looking just at publicly available material held in digital form, the research had found that 2 Exabytes of unique information were generated in that year (equivalent to roughly 250 Megabytes for each person on the planet); this excluded e-mail or voice data. They estimated that the quantity of data being produced was growing by at least 50% yearly.

Access to that information is getting easier. Mayer gave the 'I'm feeling lucky' button in Google, which gets you straight to your top result, as a simple example of how searches are becoming more focused.

However, some say that, paradoxically, their very sophistication is actually reducing the value that search engines have. The crux of the argument is that as searching gets more accurate there is less space for serendipity and that there is value in information that's acquired serendipitously.

It's a point worth pondering, especially if you're someone who is linearly driven. In crude terms, what's being suggested is that if you only ever get answers to the specific questions you pose, you're going to end up not knowing very much. The issues here have far-reaching implications not just for technology, but also for how we structure society. How do we go about translating information into genuinely useful knowledge? How do we give young people the understanding and the competencies that will help them to negotiate an uncertain future?

We are moving into a world where multiple careers will be the norm. Fewer people will specialise. Against that, though, we may get advantages from applying insights gained in one field to another.

Operating effectively in this kind of world requires a different skill set. Our young people need to develop resilience, a questioning attitude, the ability to think metaphorically - in other words, creativity. Educators must adapt accordingly.

For Professor Tim Brighouse the imposition of a National Curriculum in UK schools is taking education down the wrong path. It imposes a regime of tests, targets and academic achievement, which reflects the industrialised ethos and is wholly inappropriate to tomorrow's knowledge based society. He is especially concerned that creativity is being stifled rather than encouraged in today's schools. As he sees it, children are "going into schools as question marks, but coming out the other end as full stops".

Many teachers, he felt, coming from the world of the book, were woefully ill-prepared to educate their students about the digital world and its consequences. Brighouse quoted Toffler approvingly: 'it is the learners who inherit the earth; the learned are beautifully equipped to deal with a world which is no longer relevant.'

However, the situation is far from hopeless. There are plenty of interesting experiments happening in and around schools and their inevitable success will spawn imitators.

But perhaps the strongest reason to be optimistic comes from talking to the children themselves. Michael Frye told the Forum that he had seen graffiti daubed on the wall of a children's playground, which makes him hopeful for the future. The message read: 'play is learning without being taught'.

NOTES FROM AROUND THE FORUM

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The first World Creative Forum brought together creative thinkers and doers from many different disciplines and walks of life. Despite their differences, the delegates found plenty to discuss and saw that they had much in common. From the animated discussions taking place both in and around the theatres it was quite obvious that there was a huge appetite for dialogue.

There was also a good deal of consensus - on the importance of creativity, on where it might be found and on what must happen if it is to be cultivated. That recognition, in itself, was a key achievement. The 2003 Forum has, in effect, established the ground-rules for a conversation that can now develop and evolve. It gives us a solid platform on which to build.

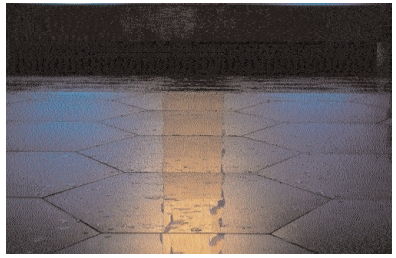
Several important themes emerged during the first event and this year we intend to examine these core issues in greater depth. An altered structure for the 2004 Forum reflects that. This time there will be a large, central theatre where key themes and issues will be discussed, but we shall also be programming fringe activities, discussions and debates, which will run in parallel to the main sessions. This 'official fringe' will allow specific issues to be debated in greater detail, offer platforms for other groups and give delegates scope to add their voices to the debate.

We want it to be your Forum, a place where the free exchange of ideas can flourish. We're introducing new elements beyond the formal sessions to encourage this. We will put in place mechanisms for capturing contributions from the floor, for increased interaction and to encourage informal exchange and the chance encounter.

Our hope is that, together, through the Forum and other events like it, we can build a global community, which will act as an engine for change. We want the Forum to develop into more than just an annual event. We are looking at a variety of ways to develop other forms of dialogue and to encourage a network of engaged individuals and organisations. High quality documentation is a key element in this strategy; this review is part of that effort.

This year the Forum will take place over two days, on Monday 20th and Tuesday 21st September. It will be held at Congress House in central London. This classic example of 1950s modernism will make a fitting setting for the World Creative Forum.

Delegate passes for World Creative Forum 2004 will be available from April, at which point of details of the programme and the agenda will be available. We look forward to seeing you in the autumn.



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