

RSA

21st century enlightenment

Journal Spring 2013

Home again

George Clarke on why reviving Britain's architectural past could ease the housing crisis



Dieter Helm considers the sustainable practices that will reverse our nation's natural decline

Colin Beard and **Ilfryn Price** on how space is shaping the way we work

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Your nominations are a great way to add the expertise and enthusiasm of friends and colleagues to the Fellowship community. You can nominate them online at www.theRSA.org/nominate. We will send a personalised invitation on your behalf and notify you if your nominee becomes a Fellow.

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“THE BRITISH PUBLIC NEEDS THE SPACE, FREEDOM AND FINANCIAL INCENTIVES TO GET ON WITH SAVING THESE BUILDINGS”

GEORGE CLARKE, PAGE 10

REGULARS

- 06 UPDATE
The latest RSA news
- 09 PREVIEW
Events programme highlights
- 46 NEW FELLOWS / REPLY
Introducing six new RSA Fellows and your views on recent features
- 48 REVIEW
Neil Shubin explains how the human body is linked to the history of our planet, the solar system and even the universe; while Miles Hewstone wonders why we all can't live together
- 50 LAST WORD
Cosmos: Martin Rees ponders the interstellar future of the human race

FELLOWSHIP IN ACTION

- 19 *Vertical allotments*
- 24 *Cribbd*
- 29 *Baltic*
- 41 *New Endings*

FROM THE ARCHIVE

- 13 *Keeping a village alive*

FEATURES

- 10 HOUSING
Restoration Britain
Architect and presenter George Clarke looks at how we can reuse and recycle the UK's empty buildings to try and solve the country's housing crisis
- 16 ENVIRONMENT
Natural capital
Dieter Helm explains why the UK needs an environmental balance sheet to help preserve its green spaces and create an energy policy for the future
- 20 TECHNOLOGY
Change networks
The online revolution has meant that traditional forms of solving global problems, such as the United Nations and the World Bank, are becoming obsolete. The digital expert Don Tapscott explains what is replacing them: nine types of global solution networks
- 26 CITIES
Smart connections
Zachary Neal looks at how, over hundreds of years, cities have created organic street networks that shape our physical and social worlds
- 30 INTERVIEW
A new stage
Vikki Heywood, who became chairman of the RSA in October 2012, sets out her vision for the organisation's future
- 33 INSIGHT
Future thinking
We asked recent RSA speakers to nominate their thinker to look out for in 2013
- 34 ARCHITECTURE
Reshaping the spatial economy
Architect and Royal Designer for Industry Sarah Wigglesworth looks at how the recession has given birth to the opportunity for reshaping the spatial economy
- 38 DESIGN
Room for improvement
Some businesses are finally starting to get their staff's workspace right, say Colin Beard FRSA and Ilfryn Price
- 42 GOVERNMENT
The enabling state
Progressive capitalism is achievable, says David Sainsbury. It requires a state that rejects both command-and-control economics and a minimalist role to find a new way

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“THE WAY WE OCCUPY SPACE IS A VITAL KIND OF SOCIAL MINDFULNESS”



MATTHEW TAYLOR

Spaces have a profound effect on the way we behave in them, even if the factors that influence that behaviour are subtle

“The problem, Matthew, is that you are a terrible space invader.” After momentarily wondering how exactly I resembled a video game character, I realised my friend was referring to my effect on company. Andrea was one of a mainly female group of students with whom I was planning to share a house in my second year at university. She had taken me to one side to explain why she had vetoed the idea. I remember my pained response: “but everyone says I’m a great laugh”. “Yes,” she said, “maybe we don’t always want to be amused. It’s exhausting having to respond to your endless list of pathetic jokes.”

Maybe Andrea would prefer me 30 years on. No longer the life and soul of the party, indeed increasingly anti-social, now one of my favourite activities is going for long solitary runs across south London. A few years ago, I lived close to Battersea Park and would regularly jog along its Victorian parades. What an elegant place; with its lake, art gallery, subtropical gardens and, marking its northern edge, the Thames flowing between Albert and Chelsea Bridges. But it’s also lively and features, amongst other attractions, a zoo, adventure playground, tennis courts and an athletics stadium.

Clapham Common, which is now my closest large green space, has few of Battersea’s qualities. Its rarely used bandstand, shabby café and grubby ponds don’t really interrupt the basic vista of a great flat triangle of grass, muddy in winter and threadbare in summer. With its red- and blue-bibbed victims or ex-army fitness trainers competing for space with a whole variety of sports, from football to team frisbee and touch rugby, it’s much less ordered than Battersea, while all around swarm the three great tribes of baby pushers, dog walkers and joggers. When it’s warm, the Common becomes a huge earthen beach, thousands of sunbathers and picnickers radiating out from the Windmill pub, notable for featuring in Graham Greene’s *The End of the Affair* and, so it is said, holding the world record for bar takings in a single day: it must have been a hot one.

Yet I find the Common means more to me than the Park. A clue to the reason lies in the name. Even though I must have been in it a thousand times, I still feel like a visitor to Battersea. However welcoming are its many charms, its lockable gates, paying car park and carefully designated spaces remind me somehow I’m there on its terms. In contrast, the Common is, well, common. It belongs to us all and, as long as we are reasonably respectful and tolerant of each other, we make of it what we will, whatever our purpose. Emerging from the tube station, I have yet to see sheep grazing, but I’m sure they wouldn’t look out of place.

Many of this journal’s contributors are aware of the subtly different messages that spaces send to their users, whether this is the architecture prized by Sarah Wigglesworth, the offices discussed by Colin Beard and Ilfryn Price or the urban settings shaping Zachary Neal’s social networks. In a fascinating interview, Vikki Heywood, the chair of the RSA, describes the space in the world she wants the Society to fill.

Internet guru Don Tapscott draws our attention to a newly emerging online space. If he is right that the internet is giving rise to powerful global solutions networks, it is not a moment too soon. For despite the utopian hopes of many technologists, much interaction in the virtual world has been as chaotic as any crowded beach, but without any of the balancing norms of mutual respect and cooperation. Whereas most of us intuitively sense the different norms that should apply, even when the differences in context are as subtle as those between the green spaces of Battersea and Clapham, online it seems people have immense difficulty with basic distinctions between the private, the public and the downright anarchic.

Awareness of space and the way we and others occupy it is a vital kind of social mindfulness. Whether the places we live, work and play feel safe and welcome is vital to individual and collective well-being.

But this page of the journal belongs to me, so I conclude with a question: how many ears does *Star Trek*’s Captain Kirk have? Three, of course: a left ear, a right ear and space, the final frontier. If I think hard I can almost remember the sound of Andrea’s laughter. ■



Everthorpe Hall, East Yorkshire, the site of the RSA Transitions project

REHABILITATION

TRANSITIONS LAUNCHED

The RSA Transitions project – which seeks to develop a radically new approach to prison and resettlement services – was formally launched in January by the police and crime commissioner for Humberside, Matthew Grove.

The RSA is working in East Yorkshire with HMP Everthorpe, a resettlement prison for adult male offenders, on a feasibility study which will assess the potential for turning the unused Ministry of Justice land and buildings adjacent to the prison into a 'Transitions park'. Built on the parkland of Everthorpe Hall (above) the project will be run as a social enterprise, offering training, skills and resettlement services to prisoners, ex-offenders and those at risk of crime, while bringing benefits to the local area.

Speaking at the launch, Mr Grove said: "The evidence suggests that the rehabilitation element of prison is falling short with about half of all prisoners reoffending within a year of release. If what we do is incarcerate people in prison for a set period of time before returning them back to exactly where they started from, without skills, employment or prospects like some enormous game of snakes and ladders, is it any surprise that we then spend enormous amounts of time and money trying to lock them up again?"

"Transitions has so much to offer by giving offenders more of a chance to prove they can work, resettle and integrate back into society with a much greater chance of remaining there."

About 150 people from the area attended the launch event, including Fellows, voluntary and public sector representatives and employers. Since the end of 2012, the Transitions team has been working to identify the costs of bringing the 45-acre site, including a grand manor house built in 1870, back into use. It has also been engaging the local community in conversations about their aspirations for the land and buildings.

The feasibility study will include mapping the assets, skills and networks that the prisoners and other groups of offenders have with a view to being able to utilise these and fill gaps in order to increase chances of rehabilitation. The study will be complete in January 2014, producing a master plan for the site, including the business model and investment strategy that will be needed to take the project into the delivery phase.

For more information about the Transitions project, please contact Rachel O'Brien rachelo.transitions@rsa.org.uk or 07801 106 920



EDUCATION

STUDENT OPPORTUNITY

The RSA has launched an initiative that will give RSA Academy students opportunities and skills to maximise their chances of securing their desired university or workplace when they leave school.

The Student Opportunity Fund will provide enrichment activities to enhance the school curriculum and provide new learning opportunities for our students. This will build confidence, inspire creative thinking and develop problem solving; important qualities that are built through experience and not simply learnt from books. These activities will range from students starting up their own enterprises and developing socially responsible projects in their local areas to cultural visits and new sporting opportunities.

Our target is to raise £35,000, which will pay for and help run these activities over the next 12 months. Once these activities have taken place, we will undertake a thorough evaluation that will include gathering feedback from students who took part, tracking the career paths of our Academy leavers and introducing a mechanism to keep in touch with them over a longer period of time. We will use the feedback to develop these enrichment activities and offer similar opportunities to future generations of Academy students.

The Student Opportunity Fund will give RSA Academy students chances that might otherwise pass them by and lessons they will carry with them for the rest of their lives.

■ To watch the new film or to make a donation to the fund, please visit www.thersa.org/opportunityfund



COMMUNITIES

SHOUT OUT SUFFOLK

In response to below-average educational attainment in Suffolk, the RSA has worked with Suffolk County Council over the past year on Raising the Bar, an inquiry that aimed to understand what needed to change and put that into practice.

Following a lively and well-attended meeting at University Campus Suffolk (UCS) in November, a number of Fellows decided to work together to help children and young people share their views about education in the county. The group created 'Shout Out Suffolk', a project that will allow young people's voices to be heard through a variety of digital and conventional platforms.

Raising the Bar will ask young people three simple questions: what learning is like in Suffolk; what young people hope for in their lives; and what will make those things happen. Students can submit their answers through online tools such as Pinterest, and many of their responses have been highly creative.

"There's value in simply asking young people about their hopes and experiences," said Dr Emma Bond FRSA, a lecturer in childhood and youth studies at UCS. "It's fascinating to see the breadth of aspirations

young people in Suffolk have today – from designing computer games to becoming a manga artist – but I've also heard how poverty and lack of opportunity are holding many back."

The Fellows involved want their efforts to spark further work to engage young people in shaping their education; and the next phase of the project, Make It Loud, will work in a similar way around the country.

■ Fellows should visit www.shoutoutsuffolk.org for more information, including an engagement pack for schools and organisations that work with young people. You can also follow [@shoutoutsuffolk](https://twitter.com/shoutoutsuffolk) on Twitter, or email shoutoutsuffolk@ucs.org.uk

NEWS IN BRIEF

AGM

The next AGM will be held on Wednesday 9 October 2013 at 5pm in the Great Room at John Adam Street.



LEGACY

PATRICIA RANDALL TINDALE (1926–2011)

Patricia Tindale FRSA, who sadly died in May 2011, was a Fellow for more than 20 years and a great supporter of the Society. The RSA is grateful for the gift Pat left in her will, which is likely to be in the region of £700,000. The Society relies on the generous support of its Fellows to ensure that it can continue to make an impact.

Pat was born in Barnet, went to school in Sussex and studied at the Architectural Association School of Architecture. Starting as an architect in the Ministry of Education in 1949, Pat was passionate about her work and had a varied career in Whitehall. She became the final chief architect at the Department of the Environment between 1982 and 1986 and was the last architect within the Civil Service to shape government policy on the design of public house building. In response to the post-war demand for millions of extra homes, Pat led research into the best housing solutions and succeeded in persuading ministers to divert funds away from residential tower blocks and towards pre-fabricated housing. During her retirement, she was chairman of the Housing Design Awards and served on both the Building Regulations Advisory Committee and the board of Anchor Housing Association. She was active in the Reform Club and the Weavers Guild and had a room devoted to her weaving in the modern home she designed by Clapham Common.

The RSA has established the Tindale lecture series in Pat's memory. The inaugural lecture on 18 March featured design critic Alice Rawsthorn exploring the powerful and pervasive influence design has on our lives. The Society has also created the Tindale Room, a new space for Fellows

at the House. Inside the room hangs a picture of Pat, with details about her life and career. Pat's family attended a reception in October 2012 to officially open the new room. The RSA Student Design Awards now has a Patricia Tindale Legacy Award. The new brief challenges students to design an element of the built environment that can be easily reconfigured to meet different functional requirements, helping to eliminate construction waste.

The Society is in the early stages of developing a project to investigate the potential to initiate fab labs in different parts of the UK. Fab labs are small workshops offering the latest in digital fabrication, such as 3D printers and laser cutters. They have grown rapidly in the past few years and are usually open to select groups – such as design students – or to paying customers. The RSA is interested in seeding a model that has a stronger focus on providing free access to a wider range of people, such as young entrepreneurs, community groups and schools. The aim would be to develop skills and offer practical support for community initiatives and local businesses that might otherwise not have access to such advanced technology.

Another project in development is the closed-loop house, which relates to the circular economy and the idea of 'designing out waste'. It will bring together engineers, designers, architects, construction companies and waste managers to start a new house-building practice from scratch. The teams behind these projects will present their ideas to the Board in the summer. The RSA is extremely grateful for Pat's generous gift that will help future generations to fulfil their potential.

EVERY GIFT IN EVERY WILL MAKES A DIFFERENCE, NO MATTER HOW LARGE OR SMALL

Making a will is a personal decision and you will want to take care of your family and friends first. But a gift to the RSA can be as little as 1% of your estate and will make an important contribution to the Society's work, which helps more people to fulfil their potential. As it is a registered charity, making a gift to the RSA in a will is exempt from inheritance tax. To discuss making a gift to the RSA in your will, please contact Esther McCarthy, head of development on 020 7451 6961 or esther.mccarthy@rsa.org.uk

PREVIEW



ANYONE CAN CHANGE THE WORLD

Jody Williams received the Nobel Peace Prize in 1997 for her work with the International Campaign to Ban Landmines.

She firmly believes that anyone can help change the world for the better. At the RSA, she will show how people can come together to make change happen through a model that resulted from the landmine campaign and is now used by the Nobel Women's Initiative. The model supports and amplifies the efforts of women around the world working for sustainable peace with justice and equality.

Where: RSA
When: Thursday
25 April, 6.30pm



THE SIGNAL AND THE NOISE

Statistician Nate Silver, founder of the influential FiveThirtyEight blog, received international attention for his stunningly accurate predictions of the US presidential election results.

At the RSA, he will consider the art and science of prediction, reveal why most forecasts fail and show how we can isolate a true signal from a universe of increasingly large and noisy data.

Where: RSA
When: Wednesday
1 May, 6pm



LEADING CHANGE

As a headteacher, Richard Gerver transformed a failing school on the brink of closure into one of the most innovative in the country in just two years.

He will share his lessons for leading change. With many of us facing an ever-greater pace of change in our personal and working lives, Gerver will reveal how to adapt and thrive; not to fear change, but to see it as an opportunity for creative reinvention.

Where: RSA
When: Thursday
27 June, 1pm



THE POWER OF VULNERABILITY

Author and research professor Brene Brown will tackle the myth that vulnerability is a weakness. Instead, she argues, it is only by embracing vulnerability and imperfection that we can live life with courage and authenticity.

Recognising and acting on this insight has the power to transform the way we engage in our families, schools, organisations and communities.

Where: RSA
When: Thursday
4 July, 1pm

RSA Events development officer Abi Stephenson selected the highlights above from a large number of public events in the RSA's programme. For full event listings and free audio and video downloads, please visit www.thersa.org/events

FOR HIGHLIGHTS OF RECENT EVENTS, SEE PAGE 49

RESTORATION BRITAIN

*To help solve the housing crisis, we must
unlock the potential of our empty buildings*

By George Clarke

We are living in unusual times. While Britain struggles through the economic crisis and people try to keep up with the cost of living, other countries like China, Brazil and India are expanding at an incredible rate. While Britain is building fewer than one third of the homes it needs to meet the current demand, the developing world is building power stations and airports at a rate of more than one a week. There is nothing we can do about the rate of expansion in these countries other than to hope that they are able to draw on the lessons from the mistakes the UK made with housing and infrastructure, such as the slums of Victorian Britain or the concrete carbuncles of the 1960s, which had a devastating effect on our towns and cities.

One of the big questions we must ask regarding this rate of building and infrastructure expansion is how we humanise the environments we create. Will they be enjoyable and architecturally humane places to live and does the UK have any role in transferring knowledge?

While we seek to answer these questions, what new approaches do we need here to meet the housing need? Britain is an enriching place to live. In global terms, we are a very small island. Yet our cities are not particularly dense

GEORGE CLARKE IS AN ARCHITECT AND TELEVISION PRESENTER. HIS CHANNEL 4 SHOW, *THE RESTORATION MAN*, HAS BEEN ON AIR SINCE 2010

and we are not all living in super-sized towers in the sky. Most of our housing is low rise and we are lucky enough to have many urban parks as well as being surrounded by a green belt, which is highly protected. If you are lucky enough to have a decent, warm home and a roof over your head, a job to pay your bills then life is probably pretty good. However, for many people in the UK, life at the moment is tough and the state of the housing industry is making matters worse. The UK housing industry is in a major crisis and it is going to take many years for this situation to change.

As a positive and optimistic architect who is truly passionate about British architecture, I am constantly battling against the depressing facts that cast a dark cloud over our housing industry. There are nearly two million families in need of a decent home and more than 70,000 children living in temporary or sub-standard accommodation, which has a detrimental effect on their health and education. There are more than 300,000 long-term empty homes while hundreds of thousands of people wait years for their names to reach the top of housing waiting lists. In 2012, we built little more than 100,000 new homes in Britain, less than a third of what is actually needed now and a fraction of what will be needed in the future. Tragically, even if the developers were building more homes, many people cannot afford to buy them because they do not have the required deposits >>





and, post credit crunch, banks have reduced their lending.

Since the days of Margaret Thatcher, nearly 1.5 million council homes have been sold off under the 'right to buy' scheme. Now, I believe that everyone has a right to own their own home so, in principle, I do not have a problem with 'right to buy' as a policy as it can provide personal financial security and long-term stability to communities. I am, however, against property being sold off at such a discounted rate that councils were left without the capital funds available to replace their stock. For every council home sold another should be built to replace it, so the next generation has access to affordable properties.

The self-build industry is also in turmoil. Even though self-builders collectively built more homes in 2012 than any single major house builder, Britain still built fewer self-build homes than most other countries in the developed world. Land is not made available by the government or councils and collectively, the big house builders continue to dominate the industry. The UK construction industry is stuck in the past and, when it comes to housing, fails to explore alternative methods of construction where homes could be built in controlled factory conditions, flat packed or prefabricated to produce high-quality houses that are quick and efficient to build on site. This would result in building houses that are faster to construct, cheaper and better, but there is resistance, including within government, to taking this bold step.

THE TIME IS RIGHT

We need to find creative and exciting ways of getting ourselves out of a recession and look for opportunities to meet social needs in the context of scarce resources. Creative thinking is needed to find viable ways of getting successful housing projects off the ground, if we are to make a real impact on current housing need and avoid stacking up more problems for the future. Creating a successful project with limited resources is never going to be easy, but I passionately believe that where there is a collective will to do something there will be a way. We just need to find it.

So why is restoration so important to Britain in these turbulent times and what role could it play in generating the ideas we need? I am delighted to see the unparalleled buzz around the word 'restoration' and the sense of passion from the public for restoring our old buildings. This passion has spread through the building and construction industry and is having an extraordinary effect on ordinary people in the Britain. There are three main reasons for this.

First, the public is reacting to the bland and boring new-build housing of the past 20 years. People are becoming tired of living in little Noddy Box, plastic houses that all look exactly the same and are tenuously labelled Windsor, Blenheim or Shakespeare in a feeble attempt to give these sub-standard new-build homes any sense of history. They are a pastiche of our architectural past and, at last, the public is beginning to see that.

“THE UK MUST THINK ABOUT USING WHAT IT ALREADY HAS IN AN EXCITING AND INNOVATIVE WAY”

Second, there is a greater public appreciation of the history of buildings and many people want to live in a home that is not only full of character, but has a unique story to tell. Many of our old buildings have been around for much longer than we have and will hopefully be around for years to come once we have gone. An old building can have character and personality to the point where a passionate owner gives it a name or regards it as a member of their family. Restoring an old building not only creates a powerful emotional connection between the owner and building, but it also allows the owner to create their own chapter in the building's history.

Finally, in these difficult economic times, why not recycle and reuse our old buildings that have been abandoned and have served no purpose for many years? It is a tragic waste that we have so many redundant buildings lying empty that can be saved, converted into a much-needed family home and given a new lease of life.

With the UK economy struggling to grow, we need to think about using what we already have in an exciting and innovative way. Restoring our unique and historic building stock is a great way to kickstart the economy, providing desperately needed jobs and skills, as well as some of the additional homes that the country is crying out for. Yes, Britain must build more new homes, but we need to do this while restoring and reinventing all of our old buildings at the same time.

LEARNING FROM PAST MISTAKES

Throughout the 1950s and 1960s, we lost far too many beautiful buildings. I can understand why it came about. Britain had just come out of the most terrible war and the nation yearned for a new and modern form of architecture that would raise the spirits of the nation. We were only interested in preserving the ‘Rolls Royce’ buildings that had survived the war, such as our cathedrals and palaces, but so many more wonderful buildings were swept away to make way for the new modernist style of architecture that was imposed. This was not British architecture's proudest moment.

One such loss was the old Euston station and Euston Arch in London. The modernists campaigned for its demolition, whereas groups such as the Victorian Society, whose vice-chairman was the fantastic restoration warrior Sir John Betjeman, attempted to raise £90,000 to pay for the relocation of the arch and pleaded for a stay of execution. Unfortunately,

demolition began in December 1961 and the new station opened in 1968. Even at the time it was built, the station's modernist style was not celebrated by everyone. Writing in *The Times*, Richard Morrison stated that “even by the bleak standards of Sixties architecture, Euston is one of the nastiest concrete boxes in London: devoid of any decorative merit; seemingly concocted to induce maximum angst among passengers; and a blight on surrounding streets. The design should never have left the drawing board, if, indeed, it was ever on a drawing board.”

Compare this with the incredible success of St Pancras station, which is by far my favourite large-scale restoration project in the world. William Barlow designed St Pancras train station in 1863 and work on site began three years later. The famous Barlow train shed arch spans 73m (240ft) and is more than 30m (100ft) high at its apex. At the front of this impressive station shed is the red brick Gothic façade, which became the Midland Grand Hotel. In 1935, the hotel closed and the building was used for railway offices. The greatest threat to the station came in 1966 when there were rumours of demolition. Thankfully, angry public opinion had been sharpened by the demolition of Euston and Sir John Betjeman stepped up to lead the campaign to save and protect St Pancras. In >>

FROM THE ARCHIVE

KEEPING A VILLAGE ALIVE

In 1929, the RSA transformed West Wycombe, an unwanted, empty Buckinghamshire village that faced an uncertain future, into a ‘living’ village that today has about 1,000 residents. As part of maintaining both the natural and build environments, the Society launched a campaign in 1926 to preserve ancient cottages. After a conference, chaired by the prime minister, Stanley Baldwin, the Society's campaign and the establishment of a substantial fund were approved.

The RSA purchased West Wycombe, which was up for sale in 60 lots, in its entirety in 1929. In 1934, after extensive repairs and without alienating properties from their original purpose, the Society handed the village over to the National Trust for permanent preservation. It was the Trust's first major property.

1967, the government listed the station and hotel as Grade I. It has since been transformed and restored into one of London's most prized architectural assets.

All of our old buildings, no matter how big or small, are important to the heritage of our country. I am not a deluded romantic clinging onto the coattails of our architectural past, but I am passionate about the good buildings we have in this country and firmly believe that no building should be demolished until we have exhausted all the opportunities for breathing new life into it.

There are thousands of buildings on the English Heritage 'buildings at risk' register. These are not just tired old structures; these are buildings that are in danger of collapse at any moment and could be lost forever. As well as these fragile structures, there are also tens of thousands of abandoned buildings that are not on this list, yet lie forgotten and neglected.

My television series, *The Restoration Man*, seeks to save these beautiful old buildings. Each series is made over a two-year period and every story takes you on the difficult, but incredibly rewarding journey of restoring buildings in Britain.

The programme follows the lives of ordinary people who have been brave enough to take on unusual buildings and

“WE NEED TO REMEMBER THAT A BUILDING MAY HAVE HAD MANY USES THROUGHOUT ITS HISTORY”

make huge personal sacrifices to convert them into unique family homes. Their labours of love often come at a financial and emotional price. With no experience of restoration and often lacking knowledge of even the most basic building work, their dream is to save these buildings, often on the tightest of budgets. For them, there is nothing more rewarding than seeing an old building being dragged into the 21st century and saved for future generations. They are the most fascinating and unusual stories that will show you the successes and failures of this complicated process. But this series is not just about the complexities of building; it is a celebration of the history of the forgotten architectural gems that have shaped our nation.

Many of the buildings featured in the series are incredibly unique, often listed, and were built for industrial, military or

CASE STUDY: LOCHGILPHEAD ICEHOUSE

One of my favourite stories from *The Restoration Man* is the work we did on an old industrial icehouse near Lochgilphead in Scotland. Laird Henderson bought the abandoned structure from the local farmer for the tiny sum of £6,000. The icehouse is a semi-underground building with a barrel-vaulted roof hidden beneath the Scottish landscape. It is a hobbit-like space, naturally insulated by soil and grass. When it was built in the late 1800s, it was used as a temporary fridge to store the fish caught on the nearby loch before they were taken to market. When the loch froze in winter, the men and women from the fishing company would saw through the ice and pack it into neat blocks. These would be taken to the icehouse and thrown into the subterranean space through a small window in the stone gable end. It was so well insulated by its thick walls and the tonnes of soil and grass on the roof that the ice wouldn't melt for months. The fisherman would then catch fish through the holes they had made in the frozen loch and bring the fish back to be stored temporarily in the icehouse, a natural and ecological fridge that required no power.

The irony was that with the developments of the Industrial Revolution, the building soon became redundant. It served as a farmer's storeroom for many years, which is why he was willing to part with it for such a small sum. Laird is an incredibly creative and inventive guy who has a passion for crafting things. He couldn't have been a better person to buy the building. With all of our restoration warriors I think you have to be slightly

unusual, even eccentric, to take on such challenging but unique buildings. Laird successfully gained planning permission to change the use of the building from industrial to residential. This change of use is the most important part of the entire planning process on *The Restoration Man* as it gives a much-needed new function to the old building. With Laird, I designed a new extension to the building that was built entirely from heated glass, similar to the heating technology used in modern car windscreens. The extension was a complete contrast to the dark, heavyweight icehouse. Laird's brief to me was that he wanted the extension to be a minimal 'Fox's glacier mint' on the end of the building. The extension was so light and minimal you could hardly see it. The old damp icehouse was retanked and waterproofed and amazing living, kitchen and bedroom spaces were created inside.

This restoration was a true labour of love. Laird put every penny he had into the building, spending just over £80,000 on the restoration by doing most of the work himself, as well as his heart and soul. The icehouse story ticked every single box on the list of things I wanted us to find for *The Restoration Man* series: a unique building in a beautiful location with a fascinating past, a creative and inspirational owner who put everything into the build and a property bought and restored for a very affordable budget. The fact that the project was restored on an affordable budget makes this kind of project accessible to everyone.



agricultural purposes. They are hidden gems that are uncovered and saved. But, restoration need not only be about the unique, the extraordinary, one-off flagship project. Restoration has the potential to play a much bigger role in solving the housing crisis by saving what we often regard as being our ordinary, dated housing stock. We have over 300,000 long term empty homes in the UK, many of which were intentionally made empty and marked for demolition under the failed 'Pathfinder' scheme create by John Prescott. The idea was that thousands of old, Victorian terraces would be demolished to make way for new build homes under the banner of Housing Market Renewal. The scheme did not go to plan in many areas, because moving entire communities and rehousing them is not as easy as it sounds. Pathfinder cost the UK taxpayer £2.2 billion and the scheme demolished more homes than it built.

Why not build new homes on available land and restore our beautiful Victorian housing stock, which would create more desperately needed homes. Restoring all 300,000 empty homes is not going to solve the entire housing crisis, but it would help. We should also remember that we have 25 million existing homes in Britain, many of which were built a long time ago and do not come close to satisfying the current ecological standards of the building regulations. All of these homes will need some form of sensitive restoration as they age and fall into disrepair. Even the most ordinary building can be restored and transformed into something beautiful. Restoration can

be exciting, innovative and forward thinking. You cannot be more environmentally friendly than recycling an old building, extending its life cycle for many more generations to come.

It is right that we have a strong planning system to protect our heritage, but it is important that the pendulum does not swing too far the other way. Overprotection stifles development and, if our old buildings are caught up in tedious planning laws, bureaucracy and red tape, they will never be saved and converted into much needed homes. We need to remember that a building may have had many uses throughout its history, changing its function to suit the demands and market conditions of the time. We need the same flexibility today. Just because an unusual building has never been used for residential purposes before, this does not mean it that it should be prevented from becoming a home today. The current market demands more homes so we should be free to adapt our old buildings to create them.

Most of my humble restoration warriors feel that they were battling against the planners and the system. Yet, it is the responsibility of the government and the nation's heritage groups to provide the support that is needed to save these buildings and enable restoration to reach a much wider group of people. Restoring buildings needs to be a constructive partnership for the greater good and the economy, not a tedious and drawn-out battle. Relax the planning laws, get rid of the tedious red tape, scrap VAT on refurbishment projects and allow these abandoned buildings to have a new life. ■

NATURAL CAPITAL

Dieter Helm explains how an environmental balance sheet is necessary to ensure that our natural environment does not depreciate further

In the UK, we live on a small, crowded island. Land is for us a scarce resource, and the competing uses often come into sharp conflict. Increasingly, these tradeoffs will confront the rest of the world, as it becomes an ever more crowded planet.

How well have we been making these tradeoffs? With some notable exceptions, the answer is: badly. This does not bode well for the future in which new pressures on land use – like wind farms and biomass – are added to old and continuing ones, like intensive agriculture, house building, roads and high-speed rail lines. Unless we rethink the ways we make these tradeoffs, things are probably about to get a whole lot worse. This is not inevitable, but is likely on a business-as-usual approach.

In classical economics – the sort that Smith, Ricardo, Marx and Mill wrote about – land was one of the three factors of production, alongside capital and labour. Growth therefore meant getting more land – like the frontiers in the US and the colonies – and increasing population. Capital played a bit part; for Marx in particular, it was derived from labour. As land ran out, population stopped growing and consumption was satiated, the classical economists thought we would reach a stationary state: whether Marx’s nirvana set out at the end of *The Communist Manifesto*, or Mill’s naturalist state.

In modern economics, these three factors got boiled down to just two: capital and labour. This two-dimensional approach made economic analysis tractable, but under these categories labour and capital hid a whole host of complexities on the grounds that they all

could be substituted for each other. Environmental issues were treated as a type of market failure, and skills and knowledge got bundled into human capital.

This now looks at best like a naïve simplification. What got left out was natural capital; or rather it got tagged on to capital generally. Left out of the market calculations, without a price, it is not surprising that it got neglected. Though the link between value and price is fraught with controversy, a zero price too often translated into a zero value.

For many decades, Britain has been running down its natural capital. This can be seen in the depressing statistics of declining wildlife, and is reflected in everyday experience. Whether it be the monocultures of modern agriculture that have produced green deserts as farmers get better at exterminating everything but the chosen crops, the fact that fewer insects impact on our car windscreens in summer, or the grim intrusions of developments into cherished landscapes, these are all examples of a general downward trend.

The Common Agricultural Policy (CAP) has done our natural environment few favours. But it has in many respects been a continuation of agricultural intensification, which has brought tractor power and agrichemicals to the rural environment. We were digging for victory, incorporating marginal lands and subsidising production long before the CAP came along.

The sad fact about the CAP is not only has it wrought great damage, but it has been expensive, too. The subsidies have wiped out much of the economic value of agricultural production, such that the net benefit of agriculture to the economy has been rendered marginal. All the while, the wider benefits from managing the countryside have been sacrificed. >>

PROFESSOR DIETER HELM IS THE AUTHOR OF *THE CARBON CRUNCH: HOW WE'RE GETTING CLIMATE CHANGE WRONG – AND HOW TO FIX IT* AND CHAIR OF THE NATURAL CAPITAL COMMITTEE. THE VIEWS EXPRESSED HERE ARE PERSONAL.





The good news is that the CAP may at last be on its way out. No longer is output subsidised directly. Instead, farmers get paid just by virtue of being farmers, and they get extra money for doing good environmental things, like preserving field margins. Reform is painfully slow, but nevertheless it is happening.

While some pressures are being managed down, there are other pressing claims on the land. An increasing population will want more houses and, while there is a good case to be made that a large amount can be built in urban contexts and on land that has already been degraded, inevitably greenfield sites will come under pressure, too. It will no doubt be argued that many of these green fields have already been rendered devoid of much environmental value by intensive agriculture and hence can easily be lost. Yet this is disingenuous: the status quo is not a happy place to be.

The policies to reduce carbon emissions in Britain have actually added new pressures of their own. Having chosen some of the most expensive options first – including low density, intermittent wind – those who point to the costs to the countryside and biodiversity are regarded as somehow illegitimate. Ironically, concern for one environmental problem – climate change – means that other environmental damage has to be ignored. Yet wind can never be a solution to climate change; there just is not enough land to produce energy on a sufficient scale to make much of a contribution to a low-carbon world. Campaigners nevertheless regard those who, for example, wish to preserve the Lake District as NIMBYs to be derided as not serious about climate change. Putting wind farms on delicate peat lands and planting large-scale bio-crops fall into the same category. As with the CAP and agricultural value added, they not only do considerable damage, but also make little difference to climate change.

The obvious conclusion is that the way to start is by stopping doing damaging things, which are of limited economic value

except to the vested interests, in the above cases the farmers, the agricultural industry and the wind farm developers.

NATURAL ACCOUNTING

But this will only get us so far. What is really missing is any sort of national balance sheet that incorporates natural as well as other forms of capital. If we are serious about improving the natural environment – as, for example, the recent Natural Environment White Paper, *The Natural Choice: Securing the Value of Nature* (Defra 2012), proposes – then we need to make sure we know what we have got and provide sufficient funds to ensure that it does not depreciate. In other words, we need an asset value and to provide for capital maintenance to ensure that not only is there no net loss, but there is net gain.

This is beginning to happen, and not just in Britain. The recent Rio Conference – marking 20 years since the famous Earth Summit back in 1992 – endorsed a push for green national accounts. Britain is on the case, with the Office of National Statistics committed to producing such accounts by 2020. The implications are likely to be radical: once account is taken of the fact that we have been running down our assets, the level of economic growth we have achieved in the past decades will probably turn out to be much more modest.

It is not just the natural capital that counts here, but also North Sea oil and gas, and our infrastructure. Imagine what the impact would be of recognising that, once depreciation of all these assets has been deducted from GDP, growth has been much lower. Projecting this forward – and once the catch-up maintenance has been allowed for – the scope for high sustainable growth will be much less. Living within our means is not about getting back to the days of the great consumption boom of the past two decades, but a much more modest edging forward. Technical progress and greater skills will remain powerful engines for growth, but in a more constrained context.

“WE NEED TO MAKE SURE WE KNOW WHAT WE HAVE GOT AND ENSURE IT DOES NOT DEPRECIATE”

Shining the torch on what has been going on – and how unsustainable consumption has been – helps in another way, too. For when it comes to particular developments like new housing and physical infrastructure, the damage to our natural environment that these projects inevitably cause can be confronted. It is utopian to imagine that there can be no damage. Rather, the task is to first minimise that damage and then see if, in some circumstances, it can be offset.

The case for going ahead with a development is that the benefits exceed the costs. These costs should obviously include the environmental ones. In our current planning system, that is all we need to know. If the project passes the test, it goes ahead. The key point is that all we require is that the gainers could compensate the losers, not that they actually do so. Yet they can afford to compensate, because the gains exceed the costs.

Here is a radical idea: the gainers should be made to compensate the losers and, in particular, to pay for the environmental damage they cause. How could they do this? The first step is to see if there are other physical improvements that could be made that would meet this requirement. If a bit of agricultural land is built over, could an extra area of nature reserve be created? A second and more controversial idea is to make the developer pay into an offsetting bank, which environmental organisations could bid for the funds from.

Immediately there are difficulties. How exactly should we measure the physical offset? What constitutes a compensating physical improvement? Is this about habitats, ecosystems or species? It is easy to throw in the towel, but think of the consequences. If it is too difficult, we revert to either the status quo – when typically there is little environmental compensation – or we stop most development in its tracks. Though there are some in the latter camp, this isn't going to happen, whereas development almost certainly will. The status quo, on the other hand, is hardly appealing. That, after all, is how we have managed to degrade our natural capital.

THE WAY AHEAD

A more enlightened approach avoids either of these positions. Just because some cases are too difficult, it does not mean that all are. If we set ambitious objectives – that there should be clear net gains in natural capital based upon good science and a precautionary approach – and provided we do not trash core natural assets like ancient woodlands, there is considerable scope to both encourage development in the right places and improve the aggregate natural capital.

Extrapolating the experience of the 20th century through the next few decades reveals an unappealing pattern of land

use. More agricultural land and rural landscapes will become developed and industrialised. Overhead power lines, wind farms, ever more intensive large-scale agribusinesses, new towns and more urban sprawl will reduce the natural landscapes to a much smaller core. Nature will be increasingly confined to nature reserves. Although some species will thrive and adapt to the new landscapes, many more will be lost. Along with the very visible and regularly reported losses of farmland birds, the slow death of Britain's insects will continue, along with the wildflowers and marine life.

This loss of biodiversity matters. The loss of pollinating bees has finally caught the public's – and the media's – attention. But to this biological loss is added the impact on people of the loss of a wider, more natural, environment for them to enjoy. The natural environment has massive health and recreational benefits.

It does not, however, have to be like this. Reversing this decline in our natural capital is not only desirable, but also quite possible to achieve. The obvious place to start is with the low-hanging fruit. Reforming agricultural policy is not only good for the environment, but good for the economy, too. The CAP has been a massive waste of money, as well as an environmental disaster. Current renewables policy is similarly very expensive and of limited benefit. Wind farms do not make much difference to climate change and there are much better and cheaper ways of achieving the objective. Climate change is global, and the global dash for coal is a root cause. That is where the money should be spent, and on future renewables like next-generation solar technologies that really could crack the problem. In both cases – CAP and renewables policy – reforms would be very welcome.

Once the easy gains have been made, we can move on to a much more intelligent debate about development, based on facts, proper accounts and compensation. Though not everything can be measured, what is not measured tends to be neglected and to drop out of the economic equation. Good science, proper metrics, green national accounts and targeting offsetting are the foundations of a good land-use policy. ■

FELLOWSHIP IN ACTION GROWING UP

As the grow-your-own movement has become increasingly popular, waiting lists for urban allotment spaces have lengthened. Lynette Warren FRSA, director at Sustainable Opportunities, had the idea of enabling people without gardens to grow vegetables without an allotment. “We developed a 3D frame that has spaces for various sizes of container,” she explained. “We experimented to see what would grow and found that anything without a big root system was viable.”

Funding from RSA Catalyst allowed Lynette to run a pilot project in 2012 with a Cambridge housing association, which works in sheltered housing and with the elderly.



CHANGE NETWORKS

Thanks to the internet revolution and the digital space's communication tools, alternatives to nation-state-based institutions have evolved in the quest for a better world

By Don Tapscott

In December 2012, we saw two contrasting models of how we can solve global problems. On one side were representatives of more than 190 governments in a closed-door meeting in Dubai, hammering out how the internet should be run and who should pay for its operation. The International Telecommunication Union (ITU), a low-profile United Nations agency that sponsored the meeting, is in charge of setting out technical standards for the world's communication technologies. In 1988, the last time the group met, the information superhighway was geek talk and the world wide web didn't exist. The internet's explosive growth occurred not because of the ITU, but despite it.

On the other hand was the self-organising ecosystem that runs the internet today. It is not controlled by states, but was fortunate to have the support of many western democracies. They were concerned about a dark agenda in Dubai. "Many states and corporations would like to get a stranglehold on the internet," said Tim Berners-Lee, the web's inventor. "The multi-stakeholder system that governs the internet works well and we need to preserve its openness."

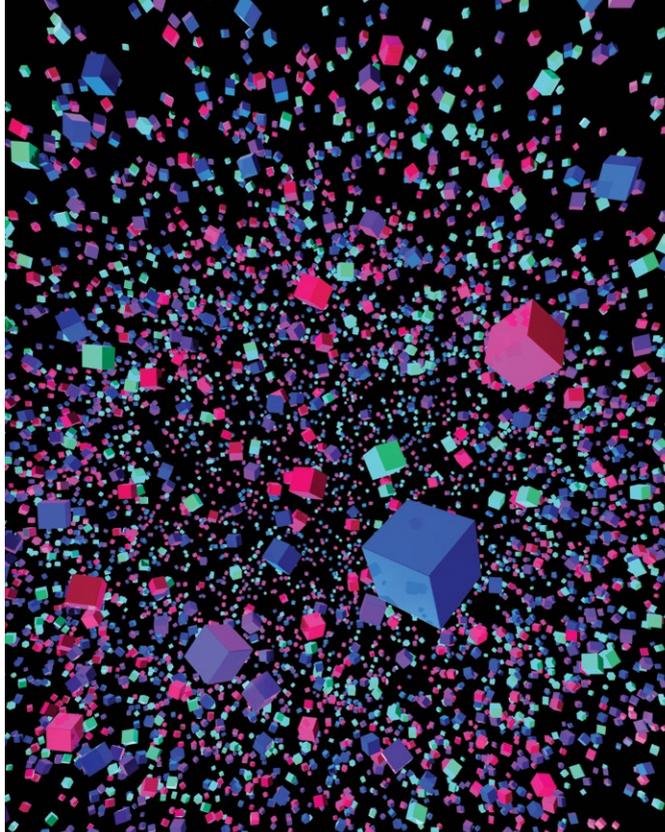
Letting an obscure 'one vote per country' UN technical agency decide who does what in the next stage of the

internet's development seemed to many to be the antithesis of what the internet represented. The blogosphere buzzed about proposals by repressive governments and money-grabbing telecommunications companies. One paper by the Russian government would have seen the ITU take over the internet. Another by European telecommunications companies would let operators charge high-bandwidth content providers such as YouTube.

Berners-Lee's fears were justified. The final treaty developed by the ITU was so potentially harmful that 55 countries refused to sign. They wanted to continue instead with the multi-stakeholder model of oversight that had fuelled the internet's spectacular growth.

The successful governance of the internet to date suggests a completely different form of global cooperation to supplement or even succeed those based on the nation state, just as the nation state itself was built on the foundations of earlier forms of government. Due to a number of factors, global governance can now be co-owned by a variety of stakeholders, including non-governmental organisations, trans-national corporations, emerging countries and various traditional government entities. Even individual citizens have an unprecedented ability to participate and engage in global activities. As former >>

DON TAPSCOTT IS THE AUTHOR OF 15 BOOKS ABOUT NEW MEDIA IN BUSINESS AND SOCIETY



UN Secretary-General Kofi Annan once put it, “We [now] live in a world where human problems do not come permanently attached to national passports”.

We are clearly in the early days of an explosion of new, networked models to solve global problems; call them Global Solution Networks. But these new networks raise myriad questions and challenges. They seem to hold great promise, but how do we ensure their legitimacy, accountability and efficacy as vehicles for social justice and global cooperation?

Throughout the 20th century nation states cooperated to build global institutions to address global problems. Many were created in the aftermath of the Second World War. In 1944, 44 Allied nations gathered in Bretton Woods, New Hampshire, to develop a series of commercial and financial relationships for the industrial world. This led to the creation of the International Monetary Fund, The World Bank and, ultimately, to the United Nations (1945), The G8 (1975), the World Trade Organisation (1995) and numerous other organisations based on nation states. Some are formal institutions addressing many issues; others are global initiatives designed to solve a problem, such as the Copenhagen conference on climate change.

But many of them are proving ineffective. We still don't have agreement on how to stop climate change, fight poverty, or govern the global financial system. For decades, large international institutions like the United Nations and the World Bank have wrestled with some of the world's most intractable problems. The global economy has made territory less of an issue and shifted the competitive battleground away from physical assets and borders. Increasingly, the national government agenda is full of items that require international response, or are beyond any one country's power to resolve.

The rapid reconstruction of Europe and the equally rapid development of India and East Asia via the Green Revolution are regarded as some of the major successes of international cooperation. On the other hand, international cooperation and international institutions have utterly failed to extend this rate of economic and social development to the least developed regions of the world.

Are today's problems simply too hard to solve? Or do traditional institutions and mechanisms need to be bolstered with new collaborative models? The post-Second World War international institutions still seem necessary, but are proving insufficient. Often national self-interests take priority and make little room for the inclusion of authentic citizen voices, ignoring the self-organised civic networks that are congealing around every major issue.

NEW MODELS OF GLOBAL PROBLEM SOLVING

The internet's rise continues to fundamentally transform how business is conducted, government operates and individuals interact. It is the greatest catalyst of economic and societal development of all time. What the internet's pioneers created as an open platform for sharing data is now a game-changing medium. At the heart of this amazing growth – and what distinguishes the Internet from other communication media – is its openness, global reach and its multi-stakeholder model of development and management. The internet radically drops collaboration costs, which enables new approaches to global collaboration and problem solving.

By slashing transaction and collaboration costs, the internet is changing the deep structure of most institutions. It has long been noted, for example, that capitalist titans such as Henry Ford would champion the marketplace's virtues, yet run their

“INDIVIDUALS HAVE AN UNPRECEDENTED ABILITY TO ENGAGE IN GLOBAL ACTIVITIES”

corporations like planned economies. Today’s smart companies are using the internet to open up and harness knowledge, resources and capabilities outside their boundaries. They set a context for innovation and then invite their customers, partners and other third parties to co-create their products and services.

One result is that new models of peer collaboration and production are successfully challenging traditional corporations. Two examples are the pioneers who created open-source software such as Linux and collaborative sites such as Wikipedia. Dispersed volunteers can create fast, fluid and innovative projects that outperform the largest and best-financed enterprises.

Enabled by the digital revolution, national, regional and local governments are moving from vertically integrated bureaucracies to more networked models of government. Ideas about government’s role, expectations of political leaders and the division of labour in the powers that define governance are in flux. Governments must sustain societies and economies in the face of climate change, energy shortages and demographic shifts. They are increasingly dependent for authority on a network of powers and counter-influences of which they are just a part. Governments are becoming a platform for the creation of public value and social innovation. They provide resources, sets rules and mediate disputes, but allow citizens, non-profits and the private sector to do most of the heavy lifting. Such innovation is now required on the global stage.

TOWARDS A NEW MODEL

Today’s networks for global problem solving have four characteristics: they must be diverse, attack a global problem, use digital communications tools and be free of state control.

These networks will include participants from at least two of the four pillars of society – government or international institutions; corporations and business interests; civic society; and individual citizens – who can now play an important role in solving global problems by forming coalitions. The challenge is to integrate resources and overcome the traditional ethnic, linguistic, geographical, political, and business-government-civic society division in a collaborative manner.

The network should also be global, or at least multi-national, and include participants from more than one country. So far there are few networks that are global and operate on multiple levels, other than the internet itself. But there are a growing number of problems that are truly global.

It must be a 21st century network in that it harnesses some forms of digital communications tools and platforms to achieve

its goals. Although there have been partnerships between various sectors of society that pre-date the internet, the new models are those networks that are enabled by the net.

The network can be created by the nation state, but must no longer be under its control. The network seeks to improve the state of the world through developing new policies or new solutions, influencing states and institutions or otherwise contributing to economic and social development, human rights, sustainability, democracy, global cooperation, building empowering platforms and global governance.

GLOBAL SOLUTION NETWORKS

New non-state networks of civil society, the private sector, government and individual stakeholders are having a big impact on solving global problems and enabling global cooperation and governance. My research suggests there are nine types: advocacy networks, operational and delivery networks, knowledge networks, policy networks, watchdog networks, platforms, global standards networks, governance networks and networked institutions.

Advocacy networks: Advocacy has been around since the early civilisations. Global advocacy, however, is a relatively new phenomenon, paralleling the rise of globalisation. In 1969, there was a global movement advocating withdrawal of US troops in Vietnam, culminating in a global day of protest on 15 October of that year. That day of demonstrations was 18 months in the planning and was coordinated primarily through postal mail and telephone calls. Today, the Kony 2012 movement involved almost 100 million people over a two-week period in a campaign to alert governments to the atrocities of Ugandan warlord Joseph Kony. The movement, while flawed, showed how advocacy can achieve unprecedented velocity.

A self-described lightning rod to channel broad public concern into a targeted campaign, Avaaz.org orchestrates the voice of 16 million members in more than 190 countries. It seizes on the ‘tipping-point’ moments of crisis and opportunity around the world, when a massive, public outcry can decide an issue. For any country, or on any issue, such moments might come only once or twice a year. But because Avaaz works in so many countries on so many issues, tipping-point opportunities crop up several times a week. Avaaz decides which causes to support with weekly polling of 10,000 randomly selected members. The organisation is a prime example of the thousands of advocacy networks that seek to change the agenda or policies of governments, corporations or other institutions.

Operational and delivery networks: Some networks actually enact the change they seek, supplementing or even bypassing the efforts of traditional institutions. CrisisCommons brings together a global community of volunteers drawn from crisis-response organisations, government agencies and citizens. They work together to build and use technology tools to help respond to disasters and improve readiness before a crisis hits.

Since 2009, CrisisCommons has coordinated crisis-event responses such as at the Haiti, Chile and Japan >>

earthquakes and the floods in Thailand, Nashville and Pakistan. Some observers argue that networks like CrisisCommons were more important in the Hurricane Sandy relief effort than traditional institutions like the Red Cross. The Global Health Program, funded by the Bill and Melinda Gates Foundation, seeks to catalyse advances in science and technology to focus on and eradicate major-impact health problems in developing countries. Some networks, such as the Red Cross, predate the internet but have been transformed by its arrival.

Knowledge networks: Prior to the internet, there were various associations of researchers or research institutes that attempted to create new knowledge that could help improve the state of the world. Their efforts were hampered by the speed of the postal service or people flying on airplanes to events. Today, there is an explosion of knowledge networks developing all kinds of new thinking, research, ideas and policies. Their emphasis is on the creation of new ideas, not their advocacy.

TED (Technology, Entertainment and Design) is a global network owned by the private non-profit Sapling Foundation, formed to generate and disseminate ‘ideas worth spreading’. Its videos alone have been viewed by hundreds of millions of people. The Global Network for Women and Children’s Health Research seeks to develop knowledge about mortality rates facing women and children in the developing world.

Policy networks: Amazingly, networks that are not based on nation states are now developing global policy. The International Competition Network is an informal, virtual network of agencies designed to promote discussion and consensus around competition-policy principles spanning the global antitrust community. It is the only international network solely dedicated to competition law enforcement.

Such policy networks are non-state webs that include non-governmental players in the creation of government policy. They may or may not be created, encouraged or even opposed by formal governments or government institutions. However, powered by global multi-stakeholder collaboration they are

becoming a material force to be reckoned with in global policy development. Their activities cover the range of steps in the policy process. They go beyond policy proposals and lobbying to include agenda setting, policy formulation, rulemaking, coordination, implementation and evaluation.

Watchdog networks: Watchdogs scrutinise institutions to ensure they behave appropriately. Topics include corruption, the environment and financial services. One of the more effective and influential networks is Human Rights Watch. Its members can be individuals, governments and media groups. With more than 250 staff, the organisation investigates human rights conditions in more than 70 countries. It relies on individual donations for funding and, with the rise of the internet, depends fully on technology as a platform for its work.

Watchdogs are in the transparency business, making it a good time to be a watchdog. Governments, companies and other institutions now operate in a hyper-transparent world. So, if an institution is going to be naked – and it really has no choice in the matter – it had better be buff.

Platforms: Some networks seek to provide platforms for other networks to organise. One example is Ushahidi, which was initially developed to map reports of violence in Kenya after the post-election fallout in 2008. Kenyans could use text messages, email or the web to report incidents of violence. Today, Ushahidi offers a mapping and content management system for anyone to use. Its goal is to help early warning systems and data visualisation for response-and-recovery. The system focuses on mobile phones, since many areas of the world do not have reliable internet access.

To date, the versatile platform has been used to report medicine shortages in Africa, to track incidents of violence in Gaza and to monitor elections in India and Mexico. *The Washington Post* even partnered with Ushahidi in 2010 to map road blockages and the location of available snow blowers during the infamous Snowmageddon, DC’s heaviest snowfall in nearly a century.

Global standards networks: Standards have always been developed by states cooperating. Today, there are non-state networks developing standards and in virtually every area of technical specification. Whether for brick size, rail gauges, electricity, telephones or computers, standards have been critical to economic development and prosperity.

State-based institutions such as the International Standards Organisation have previously led the way. However, given the growing domains requiring standards, their complexity and the requirements for vast numbers of stakeholders to be involved, the new, networked models of standards setting increasingly make sense. The internet itself is a case in point. The Internet Society and its Internet Engineering Task Force have effectively formed the standards that enable the internet to function.

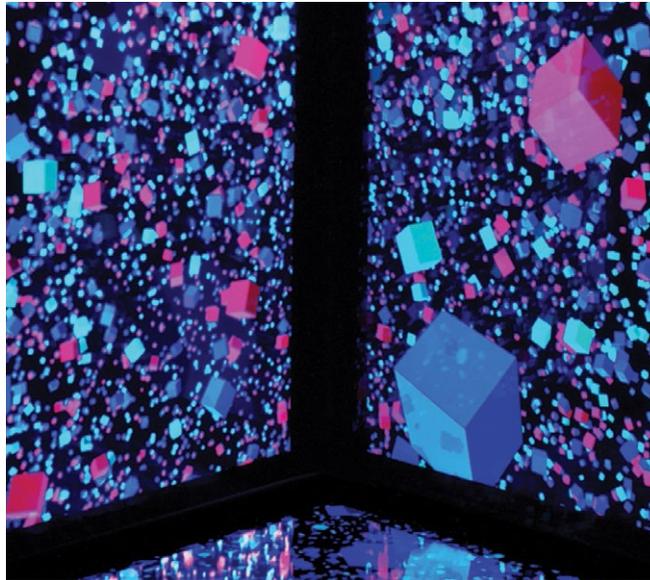
Governance networks: Unthinkably, there are now networks that have the responsibility of governing something globally, even though they do not involve governments. The most

FELLOWSHIP IN ACTION

CROWDSOURCING FOR CHILDREN

Cribbd helps 11 to 15 year olds post questions and problems they are struggling with online and get help from educators and their peers. Questions – which can be answered and rated by other users – are linked to the best online tutorials and videos, as well as the UK curriculum. “Google is a great tool,” said founder and social entrepreneur Henry Warren, “but it isn’t terribly good at telling you what resource fits which curriculum, what age it’s for, or even if it’s correct.” Cribbd’s mission is to map information to different curricula around the world.

■ www.cribbd.com, supported by www.thersa.org/catalyst



“PEOPLE ARE COLLABORATING LIKE NEVER BEFORE”

striking example is the Internet Corporation for Assigned Names and Numbers (ICANN), the non-profit that coordinates the internet’s system of unique identifiers and ensures consistent access for people around the world.

ICANN’s vision is ‘One World. One Internet’. It uses a ‘bottom-up, consensus-driven, multi-stakeholder model’ whereby members of sub-groups can raise issues at the grassroots level and almost anyone is welcome to volunteer for most of the working groups. Unlike the ITU model in Dubai, this gives ordinary citizens around the world the chance to offer their points of view and influence the future directions of the internet.

Networked institutions: Some networks provide such a wide range of capabilities they could be described as networked institutions. They are not state based, but rather true multi-stakeholder networks. A good example is the World Economic Forum. What started more than four decades ago as a meeting for European executives in the Swiss ski village of Davos has evolved into a platform to discuss and solve pressing global problems. The internet has played a large part in the transformation of the Forum from a series of meetings to a year-long collaboration involving thousands of leaders from business, government, civil society and academia. As it evolved from a ‘think-tank’ into a ‘do-tank’, the Forum developed a number of communities that research and take action on global problems.

While multi-stakeholder networks hold great promise and are already having a profound impact on the world, they

pose a number of difficult questions. Do these networks lack legitimacy because they were not democratically elected? In whose interests to they act? To whom are they accountable? Are they open to participation by appropriate people? The United Nations may have growing inadequacies as a vehicle for global cooperation, but at least it appears to be a representative and legitimate body and its delegates are accountable, in theory, to the national governments that comprise the UN.

The net facilitates unprecedented forms of negotiation on an international scale, but little is known about how that occurs or can occur best. Fen Hampson, director of the global security program at the Centre for International Governance Innovation, asks “How do such networks negotiate among themselves to form viable coalitions and how do they negotiate with state authorities. Why are some negotiations successful and others not, for example ozone treaty versus climate change negotiations?”.

It’s clear that something big is happening. Civil-society organisations, companies, academia, governments and individuals are working together in new ways on shared concerns, endeavours and challenges. People everywhere are collaborating like never before in networks, striving to reinvent our institutions and sustain our planet, our health and our existence.

The final frontier of this change is the challenge of understanding these new models and how they can fulfil their enormous potential to fix a broken world. ■



SMART CONNECTIONS

Street networks shape our physical and social worlds, but we may not have much control over where they go

By Zachary Neal

ZACHARY NEAL IS ASSISTANT PROFESSOR OF SOCIOLOGY AND GLOBAL URBAN STUDIES AT MICHIGAN STATE UNIVERSITY AND AUTHOR OF *THE CONNECTED CITY: HOW NETWORKS ARE SHAPING THE MODERN METROPOLIS* (ROUTLEDGE, 2013)

With the rise of faster and more efficient means of transportation and communication, announcing the death of space has become a common refrain in some circles. There is nothing particularly novel about such claims: the telegraph and ‘iron horse’ were supposed to render distance irrelevant, too. But, then as now, space still matters a great deal. Far more promising than pondering whether space does (or will) matter is the issue of how space matters, that is, how space is organised in such a way that it shapes our everyday experiences. Urban spaces

– the cities and metropolitan areas where a majority of the planet’s population now resides – have been, and continue to be, organised by street networks that selectively connect some places to others. Considering how these street networks evolve, how they facilitate some behaviours while constraining others, and whether we can do much about it, provides a fresh new way of thinking about cities.

THE CITY’S CIRCULATORY SYSTEM

In a seminal 1925 essay, sociologist Ernest Burgess described the growth of Chicago in terms of concentric rings around an urban core. Although this essay is most often remembered as the foundation of the influential concentric ring model, Burgess offered a far more provocative claim that often goes unnoticed: “... mobility is perhaps the best index of the state of metabolism of the city. Mobility may be thought of in more than a fanciful sense, as the pulse of the community.” Although others had drawn parallels between cities and organisms before, this calls attention to the more direct parallel between a city’s street network and an animal’s circulatory system. Both streets and arteries are, in an abstract sense, simply different varieties of resource-distribution systems, designed for getting people to work and moving blood to cells.

As Darwin taught us, the process of natural selection guides the evolution of organisms, favouring those that are best fitted to their environment. The peculiar branching structure, common to nearly all circulatory systems, is the result of such an evolutionary process; it is a highly efficient way to distribute nutrients throughout an organism’s body. The same type of arrangement is seen elsewhere in the natural world where the goal is the efficient distribution (or collection) of resources: plants’ roots, mammals’ brains and rivers’ drainage. Perhaps it should come as no surprise, then, that recent investigations have revealed that many urban street networks – again, simply another variety of distribution system – have nearly the same peculiar, but highly efficient, branching structure.

This raises tough questions about where street networks come from. In seeking an explanation for the branching circulatory systems in animals, we have two options: organic evolution guided by the push-and-pull of many uncoordinated environmental forces, or intelligent design by a creator. Likewise, we have the same two options to explain the origin of street networks: organic evolution, or intelligent design by urban planners and traffic engineers. Certainly, planners and engineers play an invaluable role in keeping streets safe and flat, but it is less clear how much influence they have over where streets actually go. A few simple rules of the physical world constrain the range of possibilities before such professionals even take the stage. For example, we typically travel in a more-or-less two-dimensional plane, which means that the path from A to B will require some minimum number of intersections with

“OLD CITIES TEND TO MOST CLOSELY RESEMBLE THE ORGANIC BRANCHING NETWORKS SEEN IN NATURE”

other paths. Similarly, there is a tradeoff between a network that offers only direct routes but at a high maintenance cost (consider, a road from your home to every possible destination), and a network that offers only indirect routes at very low cost (a single road that links each destination in a long chain). Similar constraints exist for the formation of natural circulatory or river networks also. Urban street networks emerge – much like capitalism by Adam Smith’s invisible hand – from the millions of independent and uncoordinated behaviours of people who are bound by these constraints, but who also want to get somewhere quickly. Thus, the branching-type street networks commonly seen in cities represent not an intelligent design by planners and engineers, but rather a nearly inevitable arrangement that they might tinker with afterwards.

READING URBAN SPACE

All of this would just be an interesting curiosity if it mattered for little else but the length of our commute to work. But the organisation of cities’ street networks powerfully affects our day-to-day experiences of urban space. In the 1960s, urban planner Kevin Lynch suggested that we read cities like books and that the arrangement of routes and paths are the words, shaping the stories cities can tell us. Streets not only tell us where we can go, but also where we can’t. Thus, cities with different types of street networks tell different stories and give rise to different urban cultures.

Old cities like London, whose street networks have been evolving for centuries – perhaps with occasional intervention by planners but with no overarching master plan – tend to most closely resemble the organic branching networks seen in nature. Major arterial roads, often relics of ancient thoroughfares, partition the city into a patchwork of irregular parcels within which small, winding alleys terminate abruptly in dead-ends, much like a circulatory system’s tiniest capillaries. This arrangement is particularly well suited to the formation of neighbourhoods and districts, each characterised by their own cultural microclimate. The arterial roads function as social boundaries, while the alleys function as social mixers, encouraging the formation of relationships by chance encounters within rather than between neighbourhoods. >>



Other imperial cities were designed with a specific vision. Haussmann's Paris and L'Enfant's Washington are often characterised by a radial system of streets, where the arterial roads follow diagonal paths from a series of traffic circles. Again, there is a close analogue in nature, where blood vessels radiate out from the heart and lungs. In the case of Paris and Washington, the radial arrangement not only functions to efficiently move bureaucrats (or in Haussmann's day, rebellion-quelling French troops), but also conveys a sense of empire to residents and visitors. Travelling between destinations, one is nearly always headed towards or departing from a radial point containing a monument or other symbol of imperial power. In this context, the Bastille and the Capitol are the heart and lungs of these cities and their respective empires.

Even the strict regularity of the gridiron street pattern, characteristic of newer cities, tells a story. Manhattan's grid pattern is composed of long rectangular blocks: wide 'avenues' run the length of the island from downtown (Wall Street) to uptown (Central Park and Harlem), while narrower 'streets' run the width of the island between the Hudson and East Rivers. This arrangement gives the two types of roads distinctly different functions. Avenues travel between neighbourhoods and are primarily commercial, while streets travel within neighbourhoods and are primarily residential. The New York that is experienced by visitors depends, quite significantly, on whether one is walking on a street or an avenue.

FROM CONCRETE TO COMMUNITY

Perhaps the most tangible, though invisible, impact of street networks on our everyday urban experience is their role in facilitating (or constraining) the formation of social networks. The urbanist Jane Jacobs was among the earliest and most vocal advocates of a walkable, pedestrian-friendly street system as a way to promote social mixing and strong

community bonds. More recently, her ideas have served as the foundation for the New Urbanism ideology, which holds more generally that the physical form of urban space shapes residents' social lives. These ideas are rooted in the notion that friendships and other social relationships often develop as the result of repeated chance encounters, whether on the sidewalk, in the park, or at the store. Such chance encounters cannot occur, or at least are significantly less likely, in areas where cars are necessary for transportation because driving is a solitary experience. In contrast, chance encounters are part and parcel of neighbourhoods where the street network facilitates walking.

A key goal of New Urbanism is to identify the characteristics of street networks and other elements of urban form that promote walkability, and to encourage their use in the design or redesign of neighbourhoods. One characteristic – a particularly obvious one – is short path lengths. Here, path length refers not to the actual physical distance between an origin and destination, but rather its distance in the street network. Direct routes that do not require many turns or intersections are easier to navigate, and thus more likely to be used, than the circuitous routes that one finds in modern suburban communities with looping street patterns.

A second, somewhat less obvious, characteristic is path redundancy: there should be more than one route between A and B. Redundant paths offer pedestrians variety and choice, but serve the still-more-important function of preventing isolation. Access to many suburban neighbourhoods depends on a single street that, if blocked, disconnects the neighbourhood from the rest of the world. In contrast, more traditional urban neighbourhoods typically have multiple points of access; they are better connected to the surrounding urban landscape and less likely to become isolated.

“THE PHYSICAL FORM OF URBAN SPACE SHAPES RESIDENTS’ SOCIAL LIVES”

Sometimes, roads can also serve to sever communities, rather than bond them. Although neighbourhood social relationships are often formed by chance encounters on neighbourhood streets, it is only the pedestrian-friendly streets, or what traffic engineers call tertiary streets, that really matter. Busy thoroughfares are not conducive to striking up a conversation. Thus, the social networks that give rise to community stay within the patches of land bordered by primary, arterial streets. This may seem trivial, but it has some unexpected consequences because it forces us to rethink how distance shapes urban space. You are more likely to know someone who lives a kilometre away but to whose home you can easily walk via tertiary streets, than to know someone who lives just a few metres away but whose home is across a busy expressway. The organisation of the street network, not simple physical distances, is what shapes our social world.

DRIVERS AND PASSENGERS

To claim that street networks evolve naturally raises the spectre that we are automatons stuck in a determinist tangle of roads, and that planners are mere passive observers. But this goes too far. Although street networks may tend towards specific arrangements that are mirrored in nature, this represents the starting point from which urban planners, property developers, political officials and others intervene. Precisely how much intervention is possible is unknown; the evolution of street networks, like the evolution of organisms, proceeds according to its own logic and sets some limits on our freedom to make modifications. However, restoring our seemingly truncated free will is the fact that even very small modifications to street networks can have large consequences. A single additional link in the network, for example a new tertiary street, can place two previously distinct neighbourhoods in walkable contact with one another, radically altering the pattern of social relationships within them. Likewise, the removal of a single link, for example a cross-town thoroughfare, can dramatically increase the practical distance between places. Street networks may emerge with a life of their own and powerfully shape our urban experience, but we are not completely powerless. The control we have, however, is limited and tinkering with street networks, much like tinkering with nature, can have significant and unpredictable implications.

The implications of these ideas might be considered at two different levels. First, at the practical, nuts-and-bolts level of actually building and rebuilding cities’ roads, they help define the parameters within which planners and policymakers work. On the one hand, planners are constrained by certain natural laws of structure and efficiency and are generally unable to build as they please; roads that are built but ‘do not work’ according to these laws are likely to be underused and later rerouted or simply eliminated. On the other hand, planners are empowered to make small modifications that have a big impact, strategically linking (or separating) selected places to reshape the contours of urban space. Just as capitalism emerges from the invisible hand of the market with imperfections to be smoothed out by governments, street networks emerge from similarly invisible guiding forces, with imperfections to be smoothed out by planners.

Second, at the level of understanding what urban space is and how cities work, these ideas suggest that we take the notion of networks seriously and that we think about networks broadly. Street networks structure urban space, social networks shape our friendships and life itself is made possible by circulatory and neural networks. But, despite their apparent differences, there are many similarities among these types of networks. The patterns we see in nature can help us understand cities, which in turn can help us understand our social worlds. And perhaps thinking about the social networks and street networks in cities can tell us something about the natural world, too. ■

FELLOWSHIP IN ACTION

NORTHERN LIGHTS

Godfrey Worsdale FRSA is helping bring a new audience to contemporary art in the north-east of England. The director of the Baltic Centre for Contemporary Art in Gateshead has invited Fellows to the gallery for events and hopes to use the Fellowship to broaden the centre’s work. “We welcome more than 600,000 visitors a year and we’re interested in the way art can affect different aspects of people’s lives,” Godfrey said. “I’d be very keen for Fellows to come to us and see how we can develop research. For example, we are instigating a wide range of research projects with Northumbria University and have recently worked with the NHS to look at ways art can contribute to well-being.” Baltic also contributes to the north-east’s business culture and the RSA has a part to play in that. “The north-east’s cultural institutions are part of the reason entrepreneurs locate businesses in the region,” Godfrey said. “I want us to better understand how culture can have a greater impact on the creative industries. The arts sector needs to play its part in driving the economy and contributing to society.”

■ Fellows can contact Godfrey on godfreyw@balticmill.com

INTERVIEW



A NEW STAGE

Vikki Heywood became chairman of the RSA in October. In an interview with the journal, she talks about her time at the Royal Shakespeare Company and her insights into the RSA's future

When I left the Royal Court Theatre, my plan was to work as a consultant for two years and recover from running its capital project and producing more than 100 world-premiere productions in London and New York as joint chief executive. Amongst other projects, I advised the Arts Council on what should happen to the Royal Shakespeare Company (RSC)'s stalled capital project.

“I HOPE THAT WE WILL INCREASE THE DIVERSITY AND THE ENGAGEMENT OF THE FELLOWSHIP AND THE RANGE OF PROJECTS WE UNDERTAKE”

My advice was that they should leave the company alone to have a big think about what it ought to do, because it had problems in so many areas. They had money worries and concerns about a lack of a clear mission. Several months later, artistic director Michael Boyd asked if I would join him as interim executive director. My plan was to stay for just six months, but I met such a brilliant team and had such a fantastically supportive and enlightened board, that I stayed for 10 years.

Michael and I wanted the organisation to be a place that was contemporary; that had a broad audience and felt like a place for everybody; that didn't just do Shakespeare but also contemporary work; that had sorted its finances out and was bringing in more money from a wider range of sources. Critically, we wanted the education function to be active and aligned with the central mission and for the RSC to be a place where people wanted to work.

Like the RSA, the RSC is a national institution, which means you need to make sure that the organisation is clear about its core purpose. Educating the world in Shakespeare is a pretty broad brief. So is creating a more principled and prosperous society. How do we take the principles that have built up over the RSA's life and be clear about its role today, so we can hand on something coherent to our successors? A big part of what I did at the RSC was about finding a context to describe our approach to everything we did, which we related back to our core vision and our values.

I started to use the phrase 'one company' internally. Too often, creative organisations create false internal boundaries between the people that are creating the art and those that are servicing that creation. I firmly believe that we are all working together towards the performance, whether you are in the accounts department or are a cleaner. It took about five years before everything came together and the identity of the organisation was a complete thing.

The RSA is absolutely not where the RSC was when I joined it. It is in fantastic shape and an important and exciting place to be. That is to do with all the hard work that Matthew and his team have been doing over the past few years. It has genuinely turned itself from a place that thinks into a place that also does.

Our team is extremely professional and generates an enormous amount of activity. We need to make sure that there

is a clear context in which this activity takes place and that clarity of vision reaches the Fellowship and the wider world. The RSA has a powerful brand but its identity is not entirely clear because it has changed quite a bit over the past six years.

Two things are true: the first is that the work being done is fantastic; and the second is that there's no need to change the Royal Charter. I am interested in how you take those Charter principles and define them for now. Most organisations as old as the RSA will go through this process on a regular basis. At the heart of what is special about the RSA is the Fellowship, and there has been an enormous amount of work to create a national and regional structure that enables a proper conversation to take place about the RSA and its future.

This includes being clearer about the relationship between the RSA and its Fellowship. Over the past six years, there has been a gradual increase in Fellows' ability to make and enjoy a greater connection with the activity of the RSA. One of the best examples of this is the Catalyst Fund, where good ideas can be backed by investment. I believe that the fund has the potential to have greater impact through the Fellowship's engagement.

If you are going to be an organisation that is open to great ideas, you have got to listen and find ways – like Catalyst – for ideas to move through the system. The RSA has become less top down and considerably more democratic. But it is still going to have to take a view and lead from the centre. It has responsibilities as a charity and needs to make sure it has a direction and prove that its interventions work.

The need to move on is not too dissimilar to arts organisations. Creativity and the constant demands of the creative individual mean you are always throwing away the last idea and coming up with a new one. This is something that the RSA has to live with; it has got to be able to live with this ambiguity of innovative leadership in a constantly changing world.

I am interested in how the RSA harnesses the creativity of ideas from a wide community to help make the world a better place to live in. Creativity should underpin every project and not be put in a particular box of activity. For example, the Great Recovery or Social Brain projects are extremely creative, but they do not sit in a silo called arts, commerce or manufacturing. In the area of thought leadership in the arts, the RSA did get a bit quiet and I've encouraged Matthew to look at a couple of things. At the moment, the arts world >>



needs help in continuing to battle away on this old problem of defining value. We do not yet have a body of work that you can refer to that really answers this question. The RSA is going to be commissioned by the Arts Council to do a series of written provocations, alongside a series of debates and lectures about cultural value.

The Board is having a broad conversation about how we define arts, commerce and manufacturing. They are very different from when the RSA was set up, so what are the 2013 definitions? How does the RSA innovate and be a catalyst for change in these areas in a meaningful way? The more we do as well as think, the more we need to make sure that we can show how we have made a difference. How do we evaluate and make sure that we've set the right kind of measurements?

Some projects will fail and that attracts reputational risk, an issue that the Board takes very seriously. But it should also be proud of the things that go wrong because you can learn from them. The RSA is perhaps too good at being hard on itself; always looking at the 10% that wasn't achieved rather than the 90% that was brilliant. That is a common fault of a highly creative environment because people are always looking for the next solution. As chairman, I will remind Fellows and staff to give themselves the right to be really proud.

We need to maintain a range of approaches; from projects managed from the centre, to things like Animate. At one end of this spectrum are major interventions like the Great Recovery project and our family of Academy schools, somewhere in the middle is the Catalyst scheme, and at the other end is the even lighter-touch events programme. The RSA needs to act as a sort of bellows that sucks in ideas and blows them out into the wider world. Sometimes it wants to take an idea and have a big think about how it should be improved by our influence. Sometimes we want to attract a wide range of thought about

a certain thing. The brilliant thing that the events programme and Animate do is to act as a really clever bit of flypaper that people can stick to for a while and then move on. Our Fellowship of 27,000 is just a small part of the wider world that we now connect with. More than 50 million people enjoy RSA Animate. They do not all want an in-depth relationship with the RSA but I want them to know about what we do and be proud to support our charitable purpose.

One of the great things about being chairman of an organisation that's this complicated, interesting and exciting is that things bubble up and you have to grab opportunities. So much of this is about how you behave. It is no good saying that every project is going to be collaborative if you do not have a function and a style that is collaborative. I would hope that during my time at the RSA we will be able to increasingly demonstrate a coherent approach. I hope that we will increase the diversity and the engagement of the Fellowship and the range of projects we undertake. We are doing fantastic work and we might well increase the support base if we can get the message right about what it is that we're doing and the difference that we make. Perhaps we haven't blown our trumpet loud enough.

In the second half of 2013, I will be out in the regions and the nations, meeting Fellows. At the RSC, I was talking to business leaders about how they could encourage creativity in their organisations and explaining to them that my dilemma was how to stop creativity! That is a challenge for the Board of the RSA: being a catalyst means you can want to do everything. How do we make sure that all that creativity does not mean that we quickly get bored with last week's great idea? How do we make sure that we are focusing on the right things?

I look forward to discussing these questions and more as I meet Fellows in the nations and regions during 2013. ■



FUTURE THINKING

Leading intellectuals from all fields pass through the doors of the RSA on John Adam Street each week to give lectures or take question-and-answer sessions. But who are the thinkers that get our guests' brains moving? We got in touch with some of our previous speakers to put together a list of future thinkers

SIMON BARON-COHEN (PSYCHOLOGIST) NOMINATES MARY GORDON

The Canadian educator and child advocate is the founder and president of Roots of Empathy, an evidence-based classroom programme that has helped reduce levels of aggression among schoolchildren by increasing empathy. The World Health Organisation has started to use Roots as an antidote to violence, suggesting that violence is a public health issue that empathy can help combat.

SUSAN CAIN (WRITER AND LECTURER) NOMINATES DAVID DOBBS

The author of *Reef Madness* has a book coming out this on a groundbreaking new theory dubbed the orchid hypothesis. *The Orchid and the Dandelion* is going to radically change our understanding of human personality, frailty and genetics.

DAN PINK (AUTHOR AND JOURNALIST) NOMINATES ADAM GRANT

A 31-year-old professor of management at the University of Pennsylvania's Wharton School of Business, Grant's research has begun to recast our notions of what motivates human beings. Through a series of ingenious experiments and field studies, he has shown that purpose, meaning and helping others are far more powerful motivators than conventional theory has realised.

SHERRY TURKLE (SOCIAL SCIENTIST) NOMINATES PAUL FARMER

The co-founder of Partners in Health deserves to be nominated for his work facing the politics, as well as the medical realities, of the world health crisis. By combining a medical and anthropological approach, Farmer has changed the way we see health, human crisis, and how we need to respond to global health issues.

IAN BREMMER (POLITICAL SCIENTIST) NOMINATES DANIEL KAHNEMAN

The psychologist, Nobel Prize-winner and author of *Thinking, Fast and Slow*'s work is fundamental to understanding how we think, who we are and how we interact. Kahneman has changed the way I view myself and my own thought processes. I feel more open analytically and broader accordingly. He is also a thoroughly lovely human being, which comes through on every page he writes.

NICHOLAS CHRISTAKIS (INTERNIST AND SOCIAL SCIENTIST) NOMINATES JAMES FOWLER

He is the founder, or one of the few founders, of two sub-fields in political science: the study of political networks and genopolitics, which looks at the impact of our genetic heritage on our political beliefs and behaviours. His work, which spans the study of small-scale networks to experiments involving millions of people, sheds important light on how human beings come together to be cooperative, innovative and healthy.

DAVID HARVEY (GEOGRAPHER) NOMINATES MIGUEL ROBLES-DURAN

His main work focuses on the development of tactical design strategies and civic engagement platforms to counter the more nefarious effects of neoliberal policies and practices of urbanisation. His great skill is to bring people together through a dialogue on urban design in different environments and neighbourhoods to establish a collective presence within the overall dynamics of urban processes. He bridges disciplines with ease and has the ability to work fluidly with academics from radically different backgrounds. ■

RESHAPING THE SPATIAL ECONOMY

Although the recession has constricted the way we live, there are opportunities to redress the balance

By Sarah Wigglesworth

Considered objectively, there is always the same amount of space around us. Yet we talk about ‘creating’ and ‘expanding’ space through macro development strategies and improved organisation at a micro scale, such as an individual building.

As with other resources like water or health, our access to space should be a human right, yet like income and other assets, the distribution of space is highly unequal. How space is controlled on this already crowded, urbanised island tells us a good deal about political and economic power, particularly when we are living in times of scarcity and austerity.

Land ownership is foundational to our political system (the Reform Act, the Poll Tax) and land movements – such as the Levellers and the Diggers – drew attention to the ground as a site of prosperity and well being. Those who own no space (people who are poor, homeless, migrants and travellers, for example) have no address, which means no security, safety, privacy or responsibility. Austerity creates poverty and reinforces conditions that make everyone feel more vulnerable.

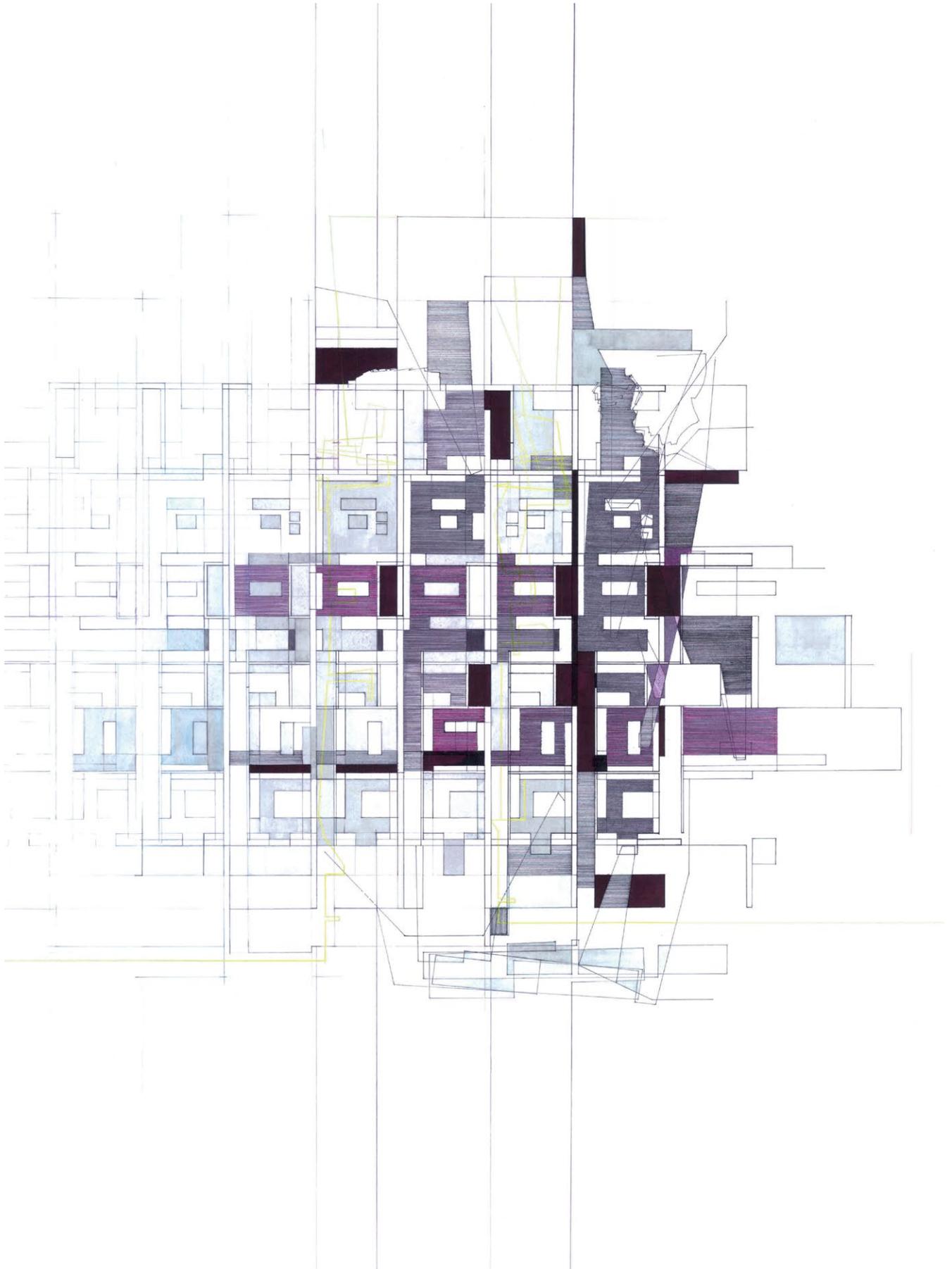
Land is the original source for creating wealth. The rich buy land in more desirable areas and, in societies with a marked divide between rich and poor, the rich respond by building gated residences protected by security systems. The fortress spatiality this creates is repeated on a larger scale by the spatial segregation of entire cities, where the well off will congregate in one neighbourhood and leave the poor to

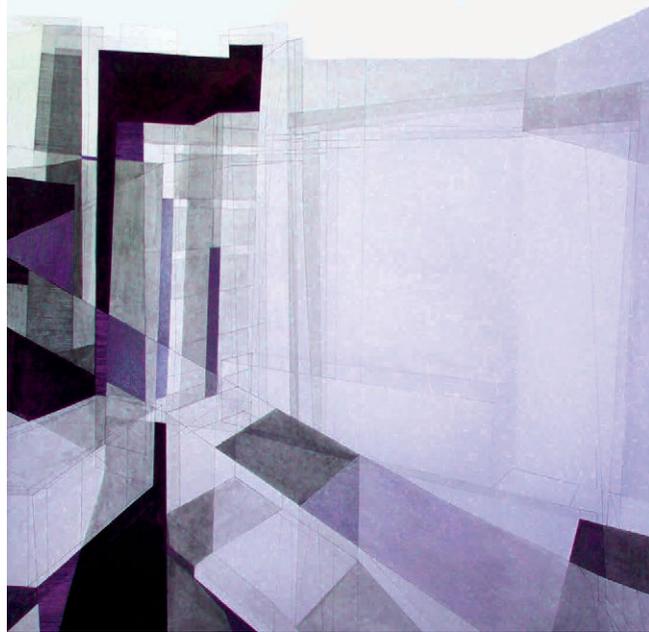
SARAH WIGGLESWORTH IS A ROYAL DESIGNER FOR INDUSTRY AND THE DIRECTOR OF SARAH WIGGLESWORTH ARCHITECTS

their own separate communities. Most cities in the US and the global south – such as Rio, Cairo and Mumbai – show extreme forms of economically driven spatial segregation and the UK is moving in the same direction. The rich travel in cars, protected and isolated from ‘ordinary’ people, and work hard to keep public transport routes away from their neighbourhood to discourage criminals. While this makes for a longer commute for domestic workers like maids, gardeners and childminders, you are less likely to notice this if you are isolated from the experiences of ordinary people, limiting your understanding of how the networks of rich and poor are interconnected.

Recent evidence indicating ‘white flight’ from UK cities is making spatial segregation a regional issue as the market abandons cities for rural areas and the north for the south-east. Any sensible government strategy would seek to redress this balance by stimulating the economic prospects in the north and devolving power to local authorities and regional government agencies. Instead, localism has, ironically, centralised power in London. Regional Development Agencies (RDAs) have been disbanded and the local authorities have suffered budget cuts. Developers chase land where the returns are highest, so competition for it is fiercest in London and the south-east, despite land and construction costs there being the most expensive. Yet with the banks refusing loans and government grants getting smaller, Britain made fewer than 100,000 housing starts in 2012, the lowest number for many years.

Urbanisation and inward migration create pressure >>> on living space, especially in areas where the economy





is healthiest. So developers build one- and two-bedroom units because these maximise their profits. It is left to the planning system to regulate the market by ensuring it delivers homes to suit all types of household. Registered Social Landlords (RSLs) are often the only providers filling this gap, but legislation has now all but erased the differences between RSLs and commercial developers, forcing them to charge tenants 80% of market rents. Originally founded as cooperative and equitable societies expressly to provide for those unable to afford market rents, RSLs are struggling to provide housing in any quantity in response to the growing demand.

TOWARDS GENUINELY SOCIAL HOUSING

The saying goes that the public wants what the public gets, so perhaps it is time for the public to get something better. Market-led approaches have left the UK with the smallest homes in Europe. There are solutions, though, that can compensate for market failure and harness the knowledge, energy and shared vision of ordinary people to create a different kind of development. The evidence is that groups of individuals are self-building and making alliances to develop co-housing, one of the fastest growing markets in UK housing.

As relatively insignificant players in the game, can architects challenge the situation? One approach is to design for flexibility and adaptability, making spaces that can be used for more than one function and have the ability to be altered throughout their lifespan. Traditionally, furniture has done this through designs that flip down, fold out and slide along. Architects are now

considering the spatial alternatives: the removal of separating walls to make living rooms, dining rooms and kitchens into one space and exploit the increasing informality and communality of family living, and the provision of sliding screens and bunk beds for small children, sleeping galleries and furniture that combine storage and privacy in one unit. In periods of austerity, existing dwellings are improved, lofts and garages are converted and, with high rates of redundancy, more people are turning homes into an economic resource by converting their spare room into a home office. The relaxation of legislation prohibiting working from home in social rented accommodation is welcome, as it could help stimulate a new burst of entrepreneurship.

Civic society has taught us to value our public space. Belonging to all of us, it has a noble history as a setting for displays of civic pride, political debate, food production and peaceful enjoyment and recreation. Women will understand the need to claim safe streets, but the right to public space includes those we often seek to remove, such as the homeless, the elderly, the disabled and young people. The recent tendency to privatise the public realm (such as the Liverpool One shopping centre) gives owners the right to choose who can occupy these spaces. While being undemocratic, it also destroys the genuinely public character of the traditional high street. In last year's Occupy camps in cities around the UK, we saw the effect of our creeping toleration of the idea that public space can belong to private owners. In this conflict, safeguarding private property overrode the right to public protest and was used as an excuse for violent eviction, physical abuse and kettling. We have lost the connection with

“THERE ARE SOLUTIONS THAT CAN HARNESS THE KNOWLEDGE AND ENERGY OF ORDINARY PEOPLE”

our land that Levellers and land reformers sought to preserve. Landowners and Parliament need reminding that public space belongs to the public, not the utility companies, highways authorities, transport networks or the police.

In the spatial politics of Parliament itself, where we now have a coalition government, it seems clear that the binary spatial organisation of the House of Commons encourages nothing but an adversarial, two-way debate. In the new order, where there is no single opposition but multiple oppositions, Parliament needs to think about how it configures its own space to reflect this new dynamic. Indeed, the internet, rather than Parliament or the streets, is the new locus for exercising political and social protest. Young people connect in new ways, relying on filtering data from selected sources and trusting sites of their own selection to deliver information, comment and debate with others. In times of economic hardship, this presents hope and possibility, a link with like-minded others that the physical space of the city strains to provide. And it affects us all: in the recession we are spending more time at home, watching digital screens for entertainment and information and, in so doing, creating new spaces for debate and connectivity.

Interestingly, this move to the digital has its corollary in the renewed interest in creating places where people can get back in touch with the land through nurturing, growing things, harvesting and foraging. The recent horsemeat scandal has shown how factory farming has alienated us from the sources of our food. Building places, including space for growing and nurturing edible species, helps to cement communities and empowers people to take ownership of their locality. Moreover, it costs little. The city has great potential to become a productive landscape. We must not allow local authorities, with their focus on health and safety and their unimaginative application of technical standards, to dominate the aesthetics and value of the landscape. Guerrilla gardening has inspired a new attitude to the spaces lost through official planning systems and people need little encouragement to use space inventively, such as for festivals, leisure, growing, music, cycling and running races. The public is already taking the initiative but planning policy needs to step up to support it.

Ironically, the coalition government's attempt to loosen the restrictions of the planning system and return power to local communities has had precisely the opposite effect. The new overarching National Planning Policy Framework (NPPF) has swept in but selective 'retained policies' from previous local authority plans and new European legislation now form

a palimpsest of policies out of which it is difficult to gain any clarity. With the 'presumption in favour of sustainable development' as the new mantra, those with financial muscle will inevitably employ the consultants that can provide a coherent and robust narrative to any proposal, no matter how badly designed and unsustainable. Underfunded local authorities will lack the resources to resist.

BEYOND THE BOTTOM LINE

Our public buildings are also suffering. Government-funded schools are being asked to make do with less of everything, including space. In the new baseline designs – standardised building types that contractors are invited to construct – commissioned by the Education Funding Agency, classroom areas have been reduced for the first time in 50 years and corridors and toilets, the danger areas where bullying takes place, are retrogressive in size and layout. Finance for new school buildings is centrally controlled and devolved through the government's academies programme to schools that may have little or no experience of commissioning buildings.

While a simplification of the procurement system is to be welcomed, Michael Gove asked for free schools to take over any unoccupied space – shopping malls, former libraries, redundant factories – and turn them into schools, but he wanted the buildings to be procured for £500 per square metre, about 20% of new-build rates. To deliver them at these costs, all quality standards were discarded. So now we can have classrooms with no daylight or fresh air, in which it is impossible to hear the teacher and with no outdoor play space. With contractors leading the process, employing architects as they see fit (if at all), the motive will always be the bottom line. Though good teachers obviously make a difference, there is a proven connection between the quality of space and children's attainment, despite the government's attempts to suppress this information. In the new market economy of schools' provision, the danger is that the well being of children becomes collateral damage in the battle of ideologies. Parents should demand the best environments for their children and support every means of achieving this by ensuring the quality of school environments is uncompromised.

The picture, then, looks mixed for the spatial economy. We make do with less space and lower quality of space. Our right to occupy public space is being challenged by landowners, business interests and government. Proposals to localise planning and devolve power are resulting, ironically, in an equal and opposite control coming from the centre. The Occupy protests provided a coherent commentary on the political environment, but vested interests overcame their mission and the press undermined the clarity of their critique. These grass-roots movements did prove one thing, though: that despite, or perhaps because of austerity, there are unparalleled opportunities to create a new economy of the spatial environment assisted by community participation, knowledge and vision. And in this new economy, the mobile device might prove the most democratic space of all. ■

ROOM FOR IMPROVEMENT

Some businesses have begun to make space work for their staff, while others are stuck in a different age

By Colin Beard FRSA and Ilfryn Price

In his classic 1964 novel, *Corridors of Power*, CP Snow dealt with decision making in and around government. The spatial metaphor he spawned still resonates today, even as policymakers encourage working without, or beyond, Whitehall's walls for reasons of effectiveness, as well as efficiency.

Snow actually paints a more subtle picture. Although senior mandarins occasionally engage in ritual exercises to determine whose office will host what meeting, real power is exercised, or fails to be exercised, in a rich variety of conversations: formal meetings, social gatherings, learned societies and country mansions. Decisions emerge from a web of interactions.

Some modern workplaces do something similar and encourage a rich ecology of conversations in different settings. But many do not. They still have open plans and cube farms, with ranks of desks drawn up like Roman legions preparing for battle. In higher education and the NHS in particular, the actual corridors linger on. Many of today's workers are still shackled to fixed and wasteful workstations. Why?

A modern university campus offers a clue. Many libraries have evolved into learning centres, supporting multiple modes of individual and group study in spaces that are only occupied at the learner's discretion. Some of these can be booked, some are there to be accessed informally. Learning is facilitated by individual reflection and social interaction. In contrast, many teaching spaces retain linear designs. Ranks of students are drawn up like troops before the commanding officer. Space is planned and allocated for instruction.

COLIN BEARD FRSA IS A SPECIALIST IN HUMAN LEARNING AND A TEACHING FELLOW AT SHEFFIELD BUSINESS SCHOOL. ILFRYN PRICE HAS BEEN RESEARCHING, TEACHING AND WRITING ABOUT CHANGE AND SPACE SINCE 1993

The distinction is potentially fundamental. Today's economy demands both learning and the most effective use of resources. Firms seek human capital, networking and agility as well as reduced overheads, yet many still plan and allocate space in ways that discourage learning and consume more resources. It is as if places for learning and working remain separate. This comparison might seem simple, yet it is deeply rooted in our perceptions of employment and the workplace. A short history makes the point.

Early in the 20th century, behaviourist thinking, associated with operant conditioning – a type of learning in which an individual's behaviour is modified by its consequences – and the work of Ivan Pavlov and BF Skinner, dominated. Operant conditioning, matched by Frederick Taylor's scientific management, was manifest in the offices of the time. Frank Lloyd Wright's 1903 Larkin Administration Building is often cited as the archetype of this approach with its overtones of the Panopticon and the supervisor gazing down on the rows of workers arranged as manual and stationary automata. It is space that easily equates with a behaviouralist view of learning. Substitute students for workers and you have the modern lecture theatre.

Approaches to learning gradually changed as cognitivist theories began to surface in the late 1950s, culminating in Benjamin Bloom's spatial hierarchy of thinking or cognition. Seeing the 'human' as unique, intelligent and rational, the cognitive focus stressed thinking, remembering and analysing as computational processing through which people sought to understand their worlds.

At much the same time, the coincidence of economic revival, construction technology and reliable lift systems enabled the creation of taller office buildings. Managerial >>



“MANY OF TODAY’S WORKERS ARE STILL SHACKLED TO FIXED AND WASTEFUL WORKSTATIONS”



the basic work unit. Their concept became fashionable and had reached America by 1967, but – in its US manifestations at least – landscaped offices retained the nuancing of status by desk size and furniture. Designer Robert Propst had similar ideas in mind when he launched the ‘action office’ in 1968, but it degenerated into today’s cube farms.

Since Rogers, cultural and social contexts have gained increasing recognition. A range of social constructivist theories posited learning as active and contextualised. Learners were seen as constructing knowledge not only for themselves as individuals, but also through social interaction. While such theories remain influential, they are now positioned among a milieu of views about human learning, such as psychoanalytic theories, multiple intelligences, advances in neuroscience and, particularly significant to our argument here, a widening recognition of the role of the body (embodiment) in learning. Interestingly, corporeal metaphors are embedded in everyday descriptions of cognitive processes: to grasp a concept, to scratch the surface, or step-by-step logic.

Variety and social interaction crept back into some corporate offices in the 1980s. Streets became fashionable, as used in Stockholm’s Scandinavian Airlines Headquarters, completed in 1988, though being seen having a coffee or walking in them was often regarded as not working and being away from one’s station. Monolithic organisations found moulds hard to break. Tom Peters, writing in 1992 under the banner of *Liberation Management*, recognised interaction when he described space management as “the most ignored – and most powerful – tool for inducing culture change, speeding up innovation projects and enhancing the learning process in far-flung organisations. While we fret ceaselessly about facilities issues such as office square footage allotted to various ranks, we all but ignore the key strategic issue: the parameters of intermingling.”

At much the same time, Cornell’s Franklin Becker advanced similar arguments and coined the metaphor of ‘organisational ecology’ to portray the complex mix of people, technology and physical space in the developing workplace. Theory had moved on. Technology had begun to be mobile. Practice and accepted wisdom lagged. Writing about office designs in the 1990s, design expert Jeremy Myerson contrasted modernisers trying to use new space in old cultures from mould breakers with new ideas and new spaces. One of the mould breakers, London-based advertising agency St Luke’s, was described in *Harvard Business Review* as possibly the world’s scariest company. Google had not yet surfaced and conventional wisdom had written off Apple in favour of Microsoft.

and supervisory offices grew in size and evolved into finely demarcated symbols of status along the line of Snow’s Corridors of Power. The post-war period saw the rise of professionals – cognitive workers – and their need, or demand, for their own offices. The Shell Centre on the South Bank in London is an early example. Here, the desk was still the managerial or professional workstation across which paper flowed from in-tray to out-tray and on which sat the telephone. Although more individuals escaped direct observation by the commander, each room’s size and fittings were strictly controlled. Those of sufficient status or power had chairs for visitors and only for the real upper echelons did the office include a more informal meeting area, usually modelled on a coffee table and easy chairs. Autonomy was for the few.

By the late 1960s, humanist theories were emphasising human agency and the fulfilment of human potential. Carl Rogers’ seminal text, *Freedom to Learn*, introduced a liberating metaphor. For a therapist like Rogers, acceptance, the acknowledgement of feelings and nurturing were central to learning. Individuals, if treated in the right way, had it within themselves to work towards solving problems. These ideas were instrumental in the early development of student centeredness.

The decade of *Freedom to Learn* also saw the appearance of *burolandschaft*. Pioneering German consultants Wolfgang and Eberhard Schelle argued for freer information flow, increased openness and equality, as well as what might now be seen as faster organisational learning. Irregular arrangements of desks displaced straight lines, although the rectangular desk remained

The understanding of human learning has shifted from animalistic simplicity – rooted in behavioural observation, predictability and control – toward an increased awareness that human dynamics are complex. This view, using ecological metaphors, suggests an adaptive collection of overlapping communities of interest that are open and dynamic, diverse and partially self-organising, and in constant evolution. Most surprising is the extent to which a very similar history could be seen in how office spaces have adapted over time.

Peters was ahead of his time but, wherever case studies have been performed, intermingling, the benefits of interaction and the drawbacks of interruptions emerge as the most positive and most negative factors on users' perceptions of their productivity. Learning centres provide both, with the user free to choose. Instruction centres and workstations don't; someone else does the choosing.

What is surprising is how fast the ecology has shifted. Jeremy Myerson, revisiting office history in 2012, pointed out that many of his 1990s mould breakers had become today's global giants. They have offices that resemble university learning centres, though other organisations have also managed this. Some, such as the Government Communications Headquarters in Gloucestershire, have rediscovered the streets concept. Others devote space to social attractors that combine catering and brand expression to draw people into a range of conversations.

Elsewhere, it appears that designs from the behaviouralist era linger on, either in linear 'one-way' lecture theatres and classrooms, or in rectilinear workplace open plans with space allocated according to status, alongside a corridor. Why do some organisations remain stuck, unable to make the important transition towards autonomous complexity, rather than pre-planned, behaviouralist conformity?

In an interview given shortly before he died, Propst made the point that "not all organisations are intelligent and progressive". These companies, he went on, make "little bitty cubicles and stuff people in them. Barren, rat-hole places." Many who commission new offices still think of stuffing in as many individual workstations as the floor plate will carry. In contrast, former US Treasury Secretary Paul O'Neill said in 1999 of his time as CEO of Alcoa: "Having successfully implemented a move to an open-design concept where everyone including me has the same workspace, we have seen wonderful changes in terms of culture and quality of work. The entire building is our office."

This quote illustrates two points that are of great significance to the future of working and learning spaces. First is the removal of overt physical symbolism of power and status. Second is the move away from the emphasis on individual space and the explicit recognition that the totality of the building is there for all; the learning centre rather than the classroom. This second point opens up new possibilities for space trading, both within the existing building footprint and, potentially, beyond. It is the model evolved from libraries rather than from the Larkin Administration Building. The library narrative has long emphasised learning. The other narrative has focused on instruction and control. It has found an

unwitting ally in the still-dominant narrative of facilities management, which focuses on unit cost.

Space, as an ignored but powerful management tool, is still not found on the educational curricula that prepare most managers or, indeed, most teachers. Academic critics, when they consider physical spaces, are prone to dismiss all modern examples as a continual expression of managerial power; indeed many occupy offices and teach in spaces that embody such power. Of course, they are often right, but some more recent approaches do grant greater autonomy to the individual.

One example is ECHQ in London, the global headquarters of the property consultancy EC Harris, occupied in 2006. The design allocates 20% of the available space to a semi-public, front-of-house open area, with clever but discreet security. Backstage, 545 'stations' provide 900 people with spaces to sit at as they need to, along with smaller, less public interactive areas and a variety of bookable spaces. The space reproduces the look and feel of the *burolandschaft*. The whole project is credited with dramatic increases in profitability, staff satisfaction and knowledge generation. Because it supports more people from a given size of space, it also delivers a significant reduction in total cost and CO₂ emissions per head.

It is not just the dramatic difference in space allocated to interaction and bookable concentration that is important here. It is also the permeability and openness of the front-of-house space. If this were to be replicated in collaboration with other businesses in, for example, a city environment, there would exist – possibly for the first time – a complex ecology of spaces and places, providing an elastic network of home and 'away' spaces to work and learn.

They would exist beyond organisations' current walls and beyond self-ownership. Such a web-like network could prove to be an exciting opportunity for the future, where such spaces would enable learning and knowledge creation in a rapidly changing world. ■

FELLOWSHIP IN ACTION

NEW ENDINGS

Wiard Sterk FRSA received Catalyst funding for his project to map dead-end streets and bring them back to life. In residential areas of UK towns and cities, many street ends have been blocked off as a traffic-calming measure. Many have become 'dead' spaces, populated by concrete bollards.

The New Endings project identified these areas in Wiard's home of Grangetown, Cardiff. Working with architect Kevin Hong FRSA, Mhairi McVicar FRSA and the Welsh School of Architecture, more than 30 locations were identified in Grangetown alone. "We wanted to give these places purpose," Wiard said. "By working with the communities in these streets, we can give the endings some identity." The Fellows involved are setting up a partnership between Cardiff University and the city council to implement these ideas over a ten-year period.

THE ENABLING STATE

The role of government should be an enabling one, not the command-and-control role advocated by traditional socialists or the minimalist role advocated today by neoliberals

By David Sainsbury

Progressive politicians and policymakers in the past 35 years have allowed the role of the state to be denigrated and ridiculed by neoliberals. They have also done very little to reform it and make it fit for purpose in the 21st century and, when they have come to the defence of the state, they have often left people confused as to whether they are defending the role of the state or public sector employees.

A first task of progressive politicians and policymakers in the 21st century is, therefore, to persuade people of the importance of a competent and active government, standing above sectional interests, both for economic growth and the quality of their lives. Without such a government, progressive politicians can achieve very little. The key question that has to be answered is not the size of the government, but how it can best define and uphold the public interest, and how it can be reformed so that it has the capability to do so in a cost-effective way.

THE ROLE OF THE STATE

If we look in this way at what we want the state to do, we come up with a very

different role for it from that which it has been assigned in the past. It is not the command-and-control role advocated by traditional socialists, nor the minimalist role advocated today by neoliberals. It is an enabling role; a market-supporting one rather than a market-directing one.

This idea of the enabling state is based on two key observations. First, economic history over the past 50 years has taught us very clearly the importance of private initiative and incentives. An examination of economic development demonstrates that it is the collective result of the individual decisions of entrepreneurs to invest in risky new ventures and experiment with new ways of doing things. Even left-wing economists now have a healthy respect for the power of market forces and private initiative.

Secondly, there is now a mass of evidence that a country's institutions heavily influence the strategy and performance of its firms. Thomas Friedman has argued in his book *The World is Flat* that we now live in a world where advanced ICT technologies mean that knowledge pools and resources have become connected, levelling the playing field and making each of us potentially an equal competitor of everyone else. If this means that markets are increasingly global, and that it is easier for most people in the world to access information, >>

DAVID SAINSBURY SERVED AS THE MINISTER FOR SCIENCE AND INNOVATION FROM 1998 TO 2006. HIS BOOK, *PROGRESSIVE CAPITALISM: HOW TO ACHIEVE ECONOMIC GROWTH, LIBERTY AND SOCIAL JUSTICE*, WILL BE PUBLISHED BY BITEBACK PUBLISHING IN MAY





then Friedman's thesis is unarguable. But if it means that everyone has an equal opportunity to be innovative and compete on equal terms with other people around the world, then it is demonstrably not true. "In a Flat World," Friedman writes, "you can innovate without having to emigrate", but for many people in the world that is still not the case.

As Richard Florida has pointed out, both population and economic activity are heavily concentrated at particular points across the world. The same is true of innovation. The world of innovation is a spiky world, not a flat one. In 2003 the University of California produced more patents than India and China combined. These figures do not show that Indians and Chinese are not innovative, but that they had to travel to places like Silicon Valley to translate their creative ideas into products and businesses. AnnaLee Saxenian, of the University of California Berkeley, has shown that Indian and Chinese entrepreneurs founded or co-founded roughly 30% of all Silicon Valley start-ups in the late 1990s.

What then are the institutions in a country that have a major impact on the strategy and performance of its firms? There are two sets of institutions that are important. The first set consists of the regulations that govern the commercial relationships of individuals and firms. These include the regulations that govern financial and labour markets, and the behaviour of firms. As a result of these regulations, when a person joins a company as an employee or buys a share, he knows what rights and obligations he takes on as a result.

These market institutions are based on specific rights/obligations structures, which are imposed on the different participants in a particular market. Different participants in a market will have different views as to what these rights/obligations should be and, as a result, the form that they take has to be decided and enforced by the state as part of the political process. If we use the term 'free market' to describe a market free of government regulations and social control, no such thing exists.

It is also important to understand that the institutions that support markets are not forms of spontaneous order, as some

neo-liberals would have us believe. Nor do they embody some structure of supposed fundamental rights. Market institutions are human artefacts created, in all their varieties beyond the most simple, by the state and, ultimately, they all need to be justified by their contribution to the well-being of society and to be perpetually open to reform.

When Margaret Thatcher radically changed employment law in the 1980s, she did not return the market to some natural state, but instead drastically altered the rights/obligations structure of employees and trade unions in the labour market. Whatever the rights and wrongs of the radical actions she took, it is a mistake to portray her as returning the market to some natural state.

The second set of economic institutions consists of countries' national systems of innovation and their education and training systems. The economist Christopher Freeman defined national systems of innovation as "the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies". Both sets of economic institutions should be seen as the 'soft infrastructure of capitalism' and as public goods which only the state can provide.

THE CAPABILITY OF GOVERNMENT

It is not enough, however, for politicians and policymakers to decide on what role they want the government to perform. They must also make certain that it has the capability to carry out the tasks that it has been given, and that it is protected from the special interest groups who want to frustrate its efforts to uphold the public interest. If the argument is accepted that the state can and should play an important enabling role in the economy, then if it fails to do so it should be reformed and not simply allowed to abandon the tasks it has been given.

While the centre of government in this country is usually regarded by the media and commentators as being over-powerful, the tools that it has for driving the government machine are indirect, largely bilateral and thinly spread. A future government that wanted to drive forward a major reform

“POLITICIANS MUST MAKE CERTAIN THAT GOVERNMENT HAS THE CAPABILITY TO CARRY OUT THE TASKS IT HAS BEEN GIVEN”

of the UK's economic institutions would do well to look at creating a similar institution to the National Economic Council (NEC), which was created by prime minister Gordon Brown in response to the economic crisis of 2007/08. As an institutional innovation, it is generally regarded as a success. It joined up departments, it speeded up decision making and delivery and it secured collective buy-in to its positions.

There is a great need to improve the general efficiency of government. While there has been a huge amount of debate about the size of government, there have been only sporadic and half-hearted efforts to improve its efficiency. Prime ministers endlessly complain that they cannot get their policies implemented effectively but do very little to improve the machinery of government. As a result, both politicians and civil servants are asked to operate a very dysfunctional system, and this inevitably leads to a huge amount of frustration and endless recriminations.

There are two major areas where I believe significant changes need to be made. The first is the lack of clarity about what is the responsibility of ministers and what is the responsibility of civil servants. No large organisation can be run efficiently where there is a lack of clarity at the top about who does what.

A second systemic problem is the lack of anyone with the constitutional responsibility for managing the civil service. I had naively thought, when I became a minister, that the head of the civil service was like the CEO of a company and had the job of managing it. But I gradually realised that the head of the civil service has no authority over the permanent secretaries who head the various departments, and that the UK civil service is best described as a loose federation. Politicians often ask why government policies are not better joined up, why the monitoring of the performance of departments is so poor, and why so little action is taken in response to the management failures of departments. The answer is simple. No one has the responsibility or authority for seeing that these things are done.

We also need to make certain that the government is able to resist the financial power of interest groups, which means tackling the funding of political parties. A major cause of

people's disillusionment with governments is that they see the political parties as being in the hands of those who fund them. To deal with this issue, the Committee on Standards in Public Life produced in November 2011 an excellent report, Political Party Finance – Ending the Big Donor Culture, which sought to remedy the situation and make it more truly democratic.

It made four key recommendations. Firstly, a limit of £10,000 should be placed on donations from any individual or organisation in any year to any political party. Secondly, the cap should apply to donations from all individuals and organisations, including trade unions, though it pointed out that if individual trade unionists were required to opt into paying affiliation fees, then these could be paid to political parties. Thirdly, the existing limits on campaign spending in the period before an election should be cut by the order of 15%.

Finally, the committee argued that existing public support to political parties should be supplemented by the addition of a new form of public support paid to every political party. This should depend on the number of votes secured in the previous election at a rate of around £3.00 a vote in Westminster elections and £1.50 a vote in devolved and European elections.

These seem to be fair and sensible proposals, and it is a shameful commentary on the political leadership of this country that all three main political parties have failed to take any action, even though all three in their last election manifestos said that they would seek to reform party funding.

I see the primary role of government as being to define and uphold the public interest, but in the past 30 years of market fundamentalism the idea that there is such a thing as the public interest has been allowed to atrophy. This has been disastrous, and if we want to tackle the many economic, social and environmental problems we face we need to revive the idea of an active and competent government that can define and uphold the public interest and can resist the financial power of interest groups. The role the government performs must, however, be an enabling one, which seeks to support private initiative, rather than a controlling one that seeks to direct it. ■

NEW FELLOWS



KARIN J BARBER

AFRICAN HEART

An African cultural anthropologist at the University of Birmingham, Karin J Barber's interest in the continent began when she was posted to Uganda as a VSO volunteer on her gap year. After completing an English literature degree, she re-qualified as an anthropologist.

Her work's main focus is on the oral and written culture of the Yoruba people, an ethnic group found predominantly in Nigeria. She also edits *Africa*, the journal of the International African Institute. Karin's current research is focused on Yoruba print publications. "These newspapers started in the mid-19th century," she said, "and quickly became a phenomenon among the urban elites."

Karin hopes that Fellowship will help her meet people who share her interests, but who work outside academia. "The RSA struck me as a particularly good way to meet people interested in arts, culture and creativity who aren't necessarily academics," she said. "We tend to be so busy at universities that, if you don't make the effort to step outside, you just don't meet these sorts of people."



MARK-ANTHONY HURN

HEADING EAST

After working at construction group Skanska since 2006, Senior Design Manager Mark-Anthony Hurn recently moved to Doha to work for QDVC a joint venture between global developers Qatar Diar and Vinci Construction. "I'm going to be overseeing their technical department," he said. "Going to Doha is exciting because they're still learning about aspects such as incorporating an environmentally friendly outlook into design."

For Mark, it is crucial to implement a holistic design from conception to completion. "It's important to me to get everyone involved round the table at the start of the process," he said. "How can we make this more economical, how can we drive sustainability into the design?"

He hopes that his experience of Fellowship will allow him both to learn and share his own knowledge. "I'm looking for insight that I can bring to what I do," Mark explained. "Fellowship will also help demonstrate to my new employers in Qatar the kind of resources available to them. It's a validation of my capability."

YOUR FELLOWSHIP

There are four main ways for Fellows to engage with the RSA:

Meet other Fellows:

Network meetings take place across the UK and are an excellent way to meet other Fellows. Check out the events taking place on the website.

Connect online:

You can like the RSA on Facebook, or follow us on Twitter @thersaorg using #thersa hashtag. There is also a Fellows' LinkedIn group, our own network www.rsafellowship.com, and blogs at www.rsablogs.org.uk

Share your skills:

Fellows can offer expertise and support to projects via SkillsBank using a form available online.

Grow your idea:

RSA Catalyst gives grants and support for Fellows' new and early-stage projects aimed at tackling social problems.

Explore these and further ways to get involved at

www.thersa.org

IN BRIEF

Here are a few more new Fellows who are working to drive social progress:

Hanneke Scott-van Wel is an architect and the director of Stone Opera, which aims to improve the relationship between people and the built environment. She also lectures in architectural design at Strathclyde University.

Vicky White is a director at Universal Board Games, an organisation based in Hackney, London, that aims to bring families and communities together through the use of organised play and board games.

Deborah Buckley-Golder is head of knowledge exchange at the Technology Strategy Board. For more than 30 years, she has worked on knowledge exchange between academia, business and the private sector.

Maria Ragan is the head of exhibitions at the Horniman Museum in Forest Hill, south London. The museum, which was founded in 1901, specialises in natural history, anthropology and musical instruments.



NOT ALL MAYORS ARE EQUAL

I was hoping that the last journal's Kippin/Barber interview ('Can cities save us?', Winter 2012) might answer the question 'mayors of what?'. The mayor of London is responsible for setting police, public transport, economic development and fire service budgets. He also has the responsibility for setting the overall vision for the capital. The responsibility, however, for delivering the bulk of public services in London remains with the 32 borough councils, the City of London Corporation and more than 50 NHS entities.

Treating all city mayors as equals ignores the reality of the services and functions they deliver, their strategic responsibilities and their ability to work within considerable organisational complexity. We need to understand the reasons behind the current success of UK cities like Manchester, Birmingham, Edinburgh and others if lessons are to be learned and replicated.

In creating space in the *RSA Journal* to better understand these personal, professional and organisational dynamics, you are providing an important contribution to this debate and you are to be commended for doing so.

—George Thorley

LOCALISM NEEDS SUPPORT

Matthew Taylor's statement ('Comment', Winter 2012) that localism is a political force full of potential is not without doubt, but if any of the present government's initiatives have been mishandled, what we call localism must be amongst them. Since this government came to power, the level of resources that were once available to the regional development agencies have been withdrawn. The government's support of elected mayors and police commissioners is another issue. Discounting the appalling expense in getting these officials elected, they have been encouraged at a time when both local government and the police are under financial pressure. In addition, the government has tied the hands of elected mayors and commissioners by, amongst other things, controlling what local government and the police can raise by means of council tax.

The fact that the government is not prepared to make the necessary radical changes in local government finance, or allow local authorities to raise their own levels of finance, demonstrates that it is not serious about localism.

—Roger Barstow Frost

RECOGNISING OUR INTERDEPENDENCE

Terence Bendixson ('Reply', Winter 2012) wants to shrink the state. He must be very pleased with the current government, which estimates that the public sector workforce will have shrunk by nearly a third by 2015. Whether this drastic reduction will be to the nation's benefit remains to be seen.

Bendixson's statistics are dubious. For example, he says we are "60th or worse" in the OECD schools league table, when a recent Pearson/Economist Intelligence Unit report placed us sixth. In any case, why compare us with Singapore rather than other countries with impressive social outcomes that are closer to us culturally and have a strong public sector, such as the Nordics, Canada and the Netherlands?

Surely the answer lies in Nick Hanauer and Eric Liu's excellent article ('Rethinking capitalism', Winter 2012): that growth and prosperity can only come from recognising the 'deep interdependence' of the different parts of society. Bendixson puts his faith in voluntary action but, as recent failures have demonstrated, this is a fragile alternative and its sustainability often depends on vigorous support from the public sector.

—Ron Glatter

THE BRIGHTER SIDE

Matthew Taylor's essay ('Power Failure', Autumn 2012) was a profound but also worryingly pessimistic piece. I felt after reading it that we ought to be able to read a reasoned attempt at optimism; one that recognised all the depressing features of today's world, but looked beyond towards a more hopeful future.

—Chris Ormell

Please send us your thoughts on the *RSA Journal* by emailing editor@rsa.org.uk or writing to: Editor, *RSA Journal*, Wardour, 5th Floor, Drury House, 34–43 Russell Street, London WC2B 5HA. Or comment online at www.thersa.org/journal



THE UNIVERSE WITHIN

31 January 2013

Palaeontologist Neil Shubin explains how the human body is linked to the history of our planet, solar system and even the universe

“THE EVOLUTION OF OUR SPECIES IS RELATED TO THE INTERACTION OF OUR PLANET’S ORBIT WITH THE ORBIT OF JUPITER”

History reveals connections that are unexpected and sometimes surprising. Understanding the formation of our bodies means understanding more than three billion years of the history of life, four and a half years of the history of our planet and 13 billion years of the universe.

The diagram of the lobe-finned fish captured my interest when I was younger as it encapsulated one of the great challenges in evolutionary biology: understanding the transition from life in water to life on land. When I started out in graduate school, I was looking for a transition fossil that bridged this gap and I was very lucky that the rocks close to my first job at the University of Pennsylvania were just the right age and type for this kind of fossil.

As soon as we started to look, we found limb bones of early limbed animals and this was where the hunt for understanding our past really started. But, to further bridge the gap, we had to find rocks that were even older than the ones in Pennsylvania. So we launched 13 years of expeditions to rocks that were 375 million years old.

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After a long time without much luck, one day everything changed in the Canadian Arctic. We found a specimen – tiktaalik – with a flat head

like an early tetrapod, but scales, fins and webbing like a fish. This meant that our common ancestors were fish and many of the structures we see appearing for the first time in this creature – such as the neck and a proto-wrist – are part of our own bodies.

We are connected to the rest of life on our planet and, indeed, tiktaalik is just one stopping point. If we look inside us, we can connect ourselves to our primate past, then to our mammal past, our fish past, all the way back to microbes. Layer after layer of more than three billion years of history lies in every organ, cell and gene in our body. That is just the tip of the iceberg. We can actually trace our history all the way back to the Big Bang.

As a palaeontologist, you get to appreciate how dynamic our planet is, and that dynamism is captured in us. The job of natural historians is to understand that dynamism, but also our relationship to it.

At the Big Bang, everything we see and know was connected at a single point in space. With the expansion of the universe came many of the fundamental properties of our physical world; first the forces that bind and repel atoms and subatomic particles, then the particles themselves.

When we look at the sky, we see stars at different stages of their lives. It turns out that the process of stellar fusion that generates the stars’ heat underlies the evolution of ever-larger atomic nuclei that are in our bodies. So, as we see in our

past, the atoms inside us are related to the fusion reactions that occur in stars.

The key point is that we are part of a recycling process. The atoms inside our body were once part of other stars and solar systems. We are temporary renters of these particles and, after we die, our atoms will be returned to the universe to become parts of other systems. It is a profound thought that we are deeply connected to the universe in the constituents that make us and what those constituents will be after we pass.

We know that the earth’s orbit changes over time and varies on a cycle of tens or hundreds or thousands of years. Some of these cycles relate to climate changes on the planet and some interact to produce periods of glaciation or lack of ice. So these changes in the orbit of the Earth have been a major factor in influencing human evolution and human history since then. The evolution of our species is related to the interaction of our planet’s orbit with the orbit of the largest planet in the solar system, Jupiter. Our human biology has been influenced by glaciation, which has been influenced by changes in the Earth’s orbit, which itself is influenced by interactions in the solar system.

We are special in a lot of ways to other animals, but we are deeply connected to other creatures. Scientists have removed us from our special perch, connected us to the rest of the planet and connected us to the cosmos beyond. ■



WHY CAN'T WE LIVE TOGETHER?

17 January 2013

Miles Hewstone discusses how 'intergroup contact' can play a fundamental role in creating peace and cohesion in diverse societies

The answer is of course we can live together. That's what all my research tells me. Contact is the idea that you can bring people together and facilitate interactions between people who belong to groups that are in some way different.

My story begins back in 1954, with *The Nature of Prejudice*, a wonderful book by Gordon Allport. He had a very simple idea that positive contact with a member of another group – perhaps a negatively stereotyped one – can improve negative attitudes. In all these kinds of studies, we are striving to change attitudes towards groups as a whole. We typically talk about two types of contact. There is the quantity: how often do you socialise with somebody? And, more importantly, the quality: when you engage with people from other groups, is it friendly or unfriendly?

In his book, Allport spoke about the importance of creating a situation that gives people the opportunity to get to know each other properly. It is no good simply throwing people together. As they found out in the US after the desegregation of schools in 1954, it does not work if the teachers and directors of education do not buy in to the idea of mixing.

A longitudinal study of ours in Northern Ireland followed people over the course

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of a year. At time one, we measured their attitudes to the ethno-religious out-groups; so we

asked Catholics about Protestants and vice versa. We asked them about how much contact they had with that group while, at the same time, measuring their contact with and attitudes to ethnic minorities. A year later, we measured these attitudes again. We were able to show that those who had contact with the Catholic or Protestant out-group not only gave a more positive outlook of that group, but showed a better attitude towards ethnic minorities. So we are talking about something that is likely to improve our orientations towards people who are different from us in diverse societies like London is today. You do not have to give everyone the experience of contact with every different out-group.

In Stellenbosch, South Africa, there is a white area, a small black area and two coloured areas. We were able to follow individuals over time. We took students at coloured schools and asked them about their contact with and attitudes to white South Africans. We followed the students up over time and found that having group friendships increased empathy, reduced anxiety and created more positive orientations.

Indirect contact is when you may not have first-hand contact with these different groups, but you know somebody in your group who does. The number of direct friends and the number of indirect friends has a direct effect on improving attitudes towards the out-group. The more contact you have, the less anxious you are about meeting the other group.

Our study in the north-west of England looked at where white and British Asian children sit in the cafeteria at lunchtime in a 40% ethnic minority school. Across all social units and with more than 3,000 seating choices coded, we found that only 4% of social units at lunchtime were mixed race. So there is a limitation to contact and it shows there is still a lot of work to be done to help people make the most of their opportunities for contact. ■

MORE FROM THE EVENTS PROGRAMME

RSA Events opened the year with the launch debate of the RSA/Pearson Think Tank Academies Commission. Chair **Christine Gilbert** shared the report's key findings and debated the implications with an expert panel and an audience of teachers, parents, education policymakers and commentators. We have hosted a number of events with new partners, including a spirited and challenging free-speech debate with the Runnymede Trust. There was also a wide-ranging discussion of the principles that should drive the teaching of English in the 21st century with the Heart of English campaign, which included an impassioned address by **Michael Boyd**, the former artistic director of the RSC. An enquiry into the future of house building in the UK included contributions from **Roger Graef**, chair of the RIBA Future Homes Commission, award-winning architect **David West**, and **Grainia Long**, chief executive of the Chartered Institute of Housing. Our series of keynote talks with global thinkers continued with a special event. Broadcaster **Evan Davis** chaired a discussion with **Jared Diamond**, the Pulitzer Prize-winning author, who revealed how traditional societies provide important insights into human nature.

The highlights above are just a small selection of recent events from the RSA programme. All of these, and many more, are available as audio downloads at www.thersa.org/audio

Full national and regional events listings are available at www.thersa.org/events

COSMOS

Will the future of human evolution allow the species to flourish in distant solar systems?

By Martin Rees

At the earliest RSA meetings, Fellows would have been regaled with travellers' tales and wondered at the exotic animals and plants brought back from Africa or the Pacific. There are still such surprises today, but you have to know where to look. Earth no longer offers an open frontier, but seems constricted and crowded; a 'pale blue dot' in the immense cosmos.

Images of the Earth taken from outer space have been iconic for environmentalists since the 1960s. Suppose some aliens had been viewing such images for our planet's entire history, what would they have seen? Over nearly all that immense time – 4.5 billion years – things would have altered very gradually. Continents drifted; ice cover waxed and waned; successive species emerged, evolved and became extinct.

But in just a tiny sliver of the Earth's history, the pace of change accelerated. The footprint of a rising and more demanding human population came to dominate the globe; the anthropocene era began. Within 50 years – little more than one hundredth of a millionth of the Earth's age – atmospheric levels of carbon dioxide began to rise anomalously fast. And something else unprecedented happened: rockets launched from the planet's surface escaped the biosphere completely. Some were propelled into orbits around the Earth; some journeyed to the Moon and planets.

If the aliens continued to keep watch, what might they witness in the next hundred years? Will the planet make a transition to sustainability? And will an armada of rockets leaving Earth have led to new communities elsewhere; on Mars and its moons, on asteroids, or freely floating in space?

Let's not kid ourselves that escape into space is a solution to Earth's problems. Nowhere else in the Solar System is as clement as the South Pole or the top of Everest. Only a few adventurers will wish to go. We will need cut-price ventures that are funded by private sponsorship and spearheaded by individuals prepared to accept high risks. A Martian base would develop more quickly if those constructing it were content with one-way tickets.

Whatever the ethical constraints imposed by us here on the ground, we should surely wish these pioneers good luck in genetically modifying their progeny

MARTIN REES
HAS BEEN THE
ASTRONOMER
ROYAL SINCE 1995

to adapt to alien environments. This might be the first step towards divergence into a new species: the beginning of the post-human era.

Darwin himself realised that "No living species will preserve its unaltered likeness into a distant futurity". We now know that 'futurity' extends far further – and alterations can occur far faster – than Darwin envisioned. And we know that the cosmos, through which life could spread, offers a far more extensive and varied habitat than he ever imagined. So humans are surely not the terminal branch of an evolutionary tree, but a species that emerged early in the overall roll call of species, with special promise for diverse evolution.

Natural selection may have slowed, but it will be replaced by 'directed' evolution. Already, performance-enhancing drugs, genetic modification and cyborg technology are changing human nature, and these are just precursors of more drastic changes. Humans could one day transcend biology by merging with computers, maybe losing their individuality and evolving into a common consciousness.

And without such evolution, our descendants would never venture to other stars, far beyond our solar system. Interstellar travel would take so long that it would be an enterprise for silicon-based entities, or organic creatures that had won the battle with death. The aeons involved in traversing the galaxy would not be daunting to immortal beings.

The pioneering European explorers were going into the unknown to a far greater extent than any future explorers would be and facing more terrifying dangers. They had no precursor expeditions to make maps, as there surely would be for space ventures. Future space-farers would always be able to communicate with Earth, albeit with a time lag. If precursor probes have revealed that there are indeed wonders to explore, there will be a compelling motive, just as Captain Cook was motivated by the biodiversity and beauty of the Pacific islands. But if there is nothing but sterility out there, the motive will be simply expansionist – in resources and energy – and that might be better left to robotic fabricators.

But we humans, in this century, may have unique cosmic significance for jump-starting the transition to silicon-based – and potentially immortal – entities that can more readily transcend human limitations, and for whom there really will be enough space in the galaxy and beyond. ■

Help future generations fulfil their potential



1755

RSA awarded its first premiums for new products and inventions

2010

RSA Catalyst set up, seed funding Fellows' projects that make an impact in the UK and internationally

1856

RSA launched the first national exams for vocational qualifications

2008

The RSA Tipton Academy opened, continuing the RSA's strong commitment to education

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