

# eg magazine

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## FUTURE CITIES

Promoting sustainable development

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# eg magazine

## PROMOTING SUSTAINABLE DEVELOPMENT

The *Future Cities* project looks at how urban structures can be adapted to the potential impacts of climate change. Liveable, economically viable cities are essential for our future prosperity. We report on the final conference recently held in Hastings, UK and the excellent guidance tool for developing climate-proof city regions.

Also, we have a thought-provoking article on the behavioural economics of car ownership and use. A must-read for transport and city planners everywhere!

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# European Delegates Warm To Climate Change Conference

Hastings hosted delegates from across Europe at a conference on 26-27 February 2013 to mark the completion of the '**Future Cities**' **Interreg** **project**<sup>1</sup> funded by the European Regional Development Fund (ERDF).



The conference had two key aims, to present the results of the project, and to discuss the future development of cities as they adapt to climate change.

The conference itself was held in the Sussex Exchange, a new sustainable conference centre funded by the *Interreg* programme, with the Jerwood Gallery in Hastings old town, hosting the reception.



Some 110 people attended including planners, engineers urban designers, developers and climate change experts, from across northern Europe with social enterprise and climate change advisors and practitioners from south east England.

The '**Future Cities**' programme has been led by the German water board 'Lippeverband', and shows how towns and cities in north west Europe can cope with the impact of climate change. Other partners include the cities of Arnhem, Nijmegen, Tiel in the Netherlands, West Flanders in Belgium, Bottrop in Germany, Rouen in France, and Hastings :- in total eight partners from five EU countries.

"It was good to see so many enthusiastic delegates - from across northern Europe here, enjoying the conference, and enjoying Hastings. It was particularly timely, co-inciding with national Climate Change Week!"

"We have already directly benefitted from the 'Future Cities' project, including the refurbishment of a property in Cambridge Gardens into four environmentally friendly flats, and the building of the Sussex Exchange. But this was just the start, and I look forward to future joint work with our European partners to ensure that we are ready and able to deal with the climate change challenge."

*Cllr Jeremy Birch, Leader of Hastings Borough Council*

A comprehensive website offers full information and details of all the pilot projects and locations<sup>2</sup>.

<sup>1</sup> Future Cities Programme <http://www.future-cities.eu/project/structure-management/work-packages/>



The Hastings conference<sup>3</sup> was the final event in the 'Future Cities' programme, and included the first public presentation of the '**Future Cities Adaptation Compass**'<sup>4</sup> a new tool. This innovative tool is one to add to the suites of others developed by other innovative climate change focused projects over recent years, some of which were also highlighted at the conference.

Among the key speakers were Cllr Jeremy Birch, Leader of Hastings Borough Council; Tim Reeder, the Regional Climate Change Programme Manager in the south east region of the Environment Agency, Katharine Knox: Policy and Research Programme Manager - Joseph Rowntree Foundation, Raimund Echterhoff, Director of German water board 'Lippeverband' and Johan Bogaert, Flemish government, Department Environment, Nature and Energy.

The presentations<sup>5</sup> and discussions were thought-provoking, about what project partners had done, what worked well and why. Participants contributed with some challenging questions along with strategic and specific observations of what could be done in future, some of which could be answered and some of which still remain as tough and intractable issues, both here in England, UK and mainland Europe.

The knotty and complex social issues around how climate change and adaptation is and will increasingly have an impact on vulnerable people in society, was poignantly described by Katharine Knox from the Joseph Rowntree Foundation. She outlined details of the research and practical project work being progressed under JRF's Climate change and Social Justice Programme and work under the Joseph Rowntree Foundation Housing Trust. (See article on page 7)

"This was a most interesting and useful conference. We are particularly interested in the human side of the climate change story, making sure that people, some of whom are very vulnerable, are considered, as well as the built environment."

*Katharine Knox, Programme Manager,  
The Joseph Rowntree Foundation*

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<sup>2</sup> Future Cities – pilot projects and locations <http://www.future-cities.eu/project/pilot-projects-locations/>

<sup>3</sup> The Future of our cities – Final Conference 26-27 February 2013, Hastings <http://www.future-cities.eu/?id=212>

<sup>4</sup> Future Cities Adaptation Compass tool <http://www.future-cities.eu/project/adaptation-compass/>

<sup>5</sup> Conference presentations - the series of 16 presentations made over the two days are freely downloadable <http://www.future-cities.eu/events-meetings/presentations/>

*The Future Cities project partners at the EU programme's concluding session hosted by UK project partner, Hastings Borough council, pictured here at the reception held at the Jerwood Gallery .*

*Left to right:*

Cllr Jeremy Birch, Leader of Hastings BC

Johan Bogaert, Belgian Pilot Adaptation, Flemish Ministry, Dept of Environment, Nature and Energy

Marie-Edith Ploteau, Future Cites Project Manager, Lippeverband

Ruut Louwers, Director, Interreg IVB NWE

Birgit Georgi – Project Manager, European Environment Agency

Katharine Knox, Programme Manager, JRF

Tim Reeder, Regional Climate Change Programme Manager, Environment Agency

Raimund Echterhoff, Board Member, Lippeverband/ Emschergenossenschaft

Jane Dodson, Climate Change Project Officer, Hastings Borough Council

Cllr Alan Roberts - The Right Worshipful Mayor of Hastings



Left to right

Marie-Edith Ploteau, Future Cites Project Manager, Lippeverband

Birgit Haupter, 'Imfrastruktur und Umwelt'

Raimund Echterhoff, Board Member, Lippeverband/ Emschergenossenschaft

***Some of the delegates view points are featured in the following pages with comments on the tools and thoughts and impressions from the sessions – from Katharine Knox, Joseph Rowntree Foundation; Brian Murphy, Greenspec; and Andrew Stuck and Annette Hards from 'Rethinking Cities'.***

*By Katharine Knox, Programme manager, Joseph Rowntree Foundation*

## Adapting European cities to climate change: The social challenge



Adaptation to climate change is very much the poor relation of mitigation when it comes to climate change policy. So it was heartening to see the substantial work being achieved through the European 'Future Cities' programme as members convened in Hastings in February and launched their new Adaptation Compass guide to support cities in developing their adaptation responses.

*Photo: York City Centre Floods © Simon Town*

Coming new to the network at its end of programme event, I was impressed by the amount of work being achieved by the cities involved. From Rouen's work to develop geothermal heating to German landscape improvements to assist in water management in Kamen and the development of new green spaces in very densely built up, flood prone cities in the Netherlands. Arnhem's heat mapping work drawing on data collected by people cycling across the city was also impressive and had enabled the city to develop a really detailed understanding of high risk areas to inform their adaptation responses. Arnhem had also been instrumental in creating a dynamic partnership of organisations working on climate change, which appeared to be growing organically, providing real scope for effective new collaborations. Closer to home, Hastings work to assess local climate impacts has helped to inform their adaptation plan for the city to 2066.

What was evident was that infrastructure and engineering based solutions have been centre stage in many of the cities' adaptation strategies. These initiatives are all important. But the Joseph Rowntree Foundation's research on climate change and social justice suggests we also need to consider more fully the social issues which will affect cities' adaptive capacity and communities' ability to prepare for, respond to and recover from the impacts of climate change, including the more frequent and severe heatwaves and flooding we may expect, if we want to be resilient to climate change.

JRF's Climate Change and Social Justice Programme, has involved research with the University of Manchester to assess social vulnerability to flooding and heatwaves across the UK. The research identifies the complexity of factors underpinning social vulnerability, including: people's individual characteristics (such as age and ill health) which may make them more sensitive to climate impacts from flooding or heatwaves; the environmental factors that may increase their exposure (such as living in high rise flats in heatwaves or basement flats in relation to flooding), and the important social factors which will critically affect their ability to deal with extreme weather. Poverty is an important issue and may directly affect, for example, people's take up of flood insurance and resources to recover from a flood, but so are less tangible issues like people's social networks, which will be important in the event of a flood, or whether they are new to an area and so less aware of risks and how to respond (Lindley et al 2011).

Lindley et al's report provides maps which highlight the geographic picture of vulnerability and how this relates to exposure to flood risk to create areas where both exposure and vulnerability coincide. The work also considers the relationship between heat exposure and social vulnerability. Overall it is urban and coastal areas that appear most vulnerable to flooding and heatwaves. Around two-thirds of the most extremely vulnerable places in the UK for river/coastal flooding are also extremely vulnerable to heat impacts. Many socially deprived neighbourhoods are also socially vulnerable to climate events. We need to look more carefully at this kind of information to support adaptation responses. It would be interesting to know if this work could be complementary for example to some of Arnhem's existing heat mapping to help understand better the profile of the communities most likely to experience high temperatures and to support engagement to reduce their vulnerability.

To adapt effectively to the impacts of climate change is a daunting challenge. It requires a shift in mindsets and taking a long term view, investing in strategies which can support and protect people and encourage resilience in the face of adversity. We need to avoid increasing our exposure to risk through the choices we make today, improve risk management to enable service and business continuity in the case of a problem, but also critically to plan ahead and change working practices to consider how service needs may change and how people can be protected long term.

We also need better safety nets, like affordable flood insurance, which in the UK is an increasing concern, as it is still uncertain whether higher risk households will be left to bear the full brunt of the costs of exposure when the current Government agreement with the insurance industry ends this Summer. Perhaps here we need to learn from the Netherlands which has shown in its state based approach to insurance that the risks of flooding inherent to the nation are too grave to leave to a market based response and flood insurance should instead be conceived of as – in part at least – a public and social good like access to healthcare (O'Neill and O'Neill). While the UK context is different, if the severity and frequency of flooding increases substantially, we might wish we had a clearer national systemic response to the problem.

Cities have an important role to play in climate change adaptation. At the forefront of supporting communities, they can help to:

- ensure the most vulnerable and disadvantaged groups are protected from the worst effects of climate change
- provide local leadership and resources and make connections to tackle issues across organisations and remits, including informing national adaptation responses
- support community resilience long term to reduce vulnerability and increase adaptive capacity.

We should not be leaving individuals, particularly the most vulnerable or disadvantaged, to pick up the pieces of systemic failures or bad decisions which could mean we are ill prepared for the consequences of climate change. The social as well as the economic consequences of inaction will be severe.

### **Joseph Rowntree Foundation Climate Change and Social Justice Programme**

The Joseph Rowntree Foundation is an independent charity and endowed foundation which seeks



to search out the causes of social problems and support policy and practice development to respond to these issues. We have been funding research on climate change and social justice in the UK since 2009 as we are concerned that the social justice implications of climate change are not well understood in a UK context. We are concerned that in the absence of preparing for the consequences of climate change, people's lives and livelihoods will be put at risk.

### **Publications on social impacts and adaptation to climate change**

Lindley, S. et al (2011). *Climate change, justice and vulnerability*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/climate-change-justice-and-vulnerability>

Houston, D. et al (2011). *Pluvial (rain related) flooding in urban areas: The invisible hazard*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/pluvial-flooding-invisible-hazard>

Fernandez-Bilbao, A. et al (2011): *Impacts of climate change on disadvantaged UK coastal communities*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/impacts-climate-change-disadvantaged-uk-coastal-communities>

Benzie, M. et al (2011) *Vulnerability to heatwaves and drought: Adaptation to climate change*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/vulnerability-heatwaves-and-drought-adaptation-climate-change>

Welstead, J. et al, SQW (2012). *Socially just adaptation to climate change*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/socially-just-adaptation-climate-change>

O'Neill, J. and M. O'Neill, (2012) *Social justice and the future of flood insurance*. York: Joseph Rowntree Foundation. <http://www.jrf.org.uk/publications/social-justice-flood-insurance>

For more information on the JRF's work on climate change and social justice please see the JRF website or contact Katharine Knox, Programme Manager on 01904 615972, [Katharine.knox@jrf.org.uk](mailto:Katharine.knox@jrf.org.uk)

# Climate Adaptation, Mitigation - or do you like my Architecture?

*Brian Murphy, founder of GreenSpec, architect, seasoned professional specification writer, offers his views on the Future Cities Adaptation Compass tool and Map Table, demonstrated at the project programme's concluding conference. Prompted by the programme, he offers thoughts on the need for climate and adaptation thinking, with guidance on governance in development control or tighter specification, to be much better integrated into the capability and capacity building of architects, and why this matters.*

As a student of construction and architecture thirty something years ago, I learned nothing to prepare me for the climate catastrophe we face, now and in the coming decades. The vast majority of my profession spend 98% of the time with the head in a computer churning out the next legal but climate-inadequate design or working drawings and specifications. 35 hours a year must be dedicated to continuing professional development and they need only do 2 hours (0.1%) on climate and sustainable architecture.

In contrast a trusted work colleague and architect has just completed a PhD in urban heat island effect, says she does not yet have the detailed understanding to apply it in architectural practice, plenty of theories and ideas but no practical experience or evidence based know-how, this will come in the following decades if she decides to specialize, advise us and we have enough time left to benefit.

In the last 5 years I have seen a few relevant publications by concerned parties, local authorities, regional bodies and government departments bringing climate issues to our attention and I make a point of asking as many audiences as I can for a show of hands 'who has heard of, read or acted upon any of the publications described by the previous speaker?' One librarian is brave enough to show her hand, exceptionally a few hands, my students of architecture might just know more than my profession.

*Future-Cities Adaptation Compass installed on the table computer in the upright position is a wonderfully simple tool that engages the user/audience with its logical approach to checking a city's vulnerability, understanding climate change impacts.*

*It enables users to carry out risk assessments and seek out opportunities, to explore adaptation options, to determine the need for actions and from a vast collection of case studies select appropriate competent sustainable measures; and feedback after the projects has been in place to ensure this tool improves over time.*

*This tool offers an opportunity for Future Cities to have a life after Interreg. I hope for all our sakes that Future Cities partners see an opportunity to build a consultancy and training off the back of this project to see continual international collaboration on climate solutions.*

Industry is not listening yet, and I regret, will only listen when the requirements are written into Development Control legislation; guidance is not enough, our industry has many professionals and solicitors well versed in arguing why that issue does not apply to their project; and regional bodies that back down when challenged by developers.



*Future Cities* part funded the sustainable design elements of the build of Sussex Exchange<sup>6</sup>, the venue of the *Future Cities* conference. Its aspirations were high, and it wears its green roof well. But sadly the building suffered all the usual value engineering (posh for 'cost-cutting') specification substitution exercises that our industry habitually engages in to revert to 'business as usual'. The story about why various of the ambitious ('dark green' specification) features failed to

materialize is a valuable and important story to be shared. This is not about finger pointing and embarrassment, but about critical thinking and learning for the future. It's about rethinking, and adjusting training and development generically to gear up the design and build process to ensure 'compromise' (in the trade 'green' specs are downgraded to 'violet') is minimised.

### **Learning and Specification software**

I know from training staff in use of specification software that most learn haphazardly, inconsistently, incomprehensively and learn in one context and apply the learning in another context inappropriately without question. I agree specification is a task most hate, but that is no excuse, we need to develop competence in all our activities. In support of my colleagues I have been writing *specifications, sustainability checklists* (1800 reads – in two years) and 'jargon busters' (395 pages and 15,000 reads in 2 years) for a few decades now. This is to try to help them ease their way into environmental and sustainable construction. These have proved popular and so are being recreated on [greenspecdownload](http://www.greenspecdownload.co.uk)<sup>7</sup> website.

Urban Heat Island effect is in there, but I rarely hear architects engaging with the issue let alone proposing solutions to it; and engineers just pop in air conditioning. I think we are all waiting for sophisticated software with all the answers, and over optimistically hail Building Information Modeling as the holy grail that will help us to 'remake the industry in novel, but desperately needed, ways; transforming an adversarial self-serving Construction Industry into a low cost, low carbon Built Environment industry that sustainably serves society' (Paul Fletcher Beyond BIM 2012).

### **So how do we engage with climate change?**

Public consultation and community engagement bring dread to designers, are objected to or reluctantly engaged with by developers. They expect and fear the meeting will be about the community arguing with the designer/developer and reduce to loudest voices taking over the meeting and little will be gained, very few see them as a means to collect client requirements to inform the brief.

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<sup>6</sup> [www.seachangesussex.co.uk](http://www.seachangesussex.co.uk)

<sup>7</sup> <http://www.greenspecdownload.co.uk/index.php?CID=780> Jargon Buster Rev 30 265 pages. 2011, Free if you register (Rev 44, 395 Pages, 2013 £3.00)

I also see architects who carried out their desks study with 1:5000 scale maps or aerial photos, pinning up their drawings, poetically announcing their philosophical approach to the design and effectively asking 'Do you like my architecture?' Most of the audience cannot understand a word, cannot read drawings nor imagine what is on offer, and they just want to know what have you done to provide safe places for my kids to play in, where are the schools and shops.

For me the most important part of the **Future Cities** outputs is the '**Map table**'<sup>8</sup>, a table computer that enables anyone that can read a map or plan (not everybody alas, can it work on oblique aerial photograph?) to engage in a discussion about their town or project. This is where their fears, wishes, ambitions could be recorded and even voted on by others to reinforce an issue. It's where the designers can interact with those ambitions and develop real solutions with powerful intelligent software that can recalculate the results of those modifications at urban and city scale. It allows all the audience to see the changes and understand instantaneously the ramifications, good or bad and try out different options.

What we need is the ability for communities or their representatives to highlight their fears, desires, aspirations; for them to be heard and seen to be included in development briefs and to see that solutions have been implemented; then they might get excited about the place the Architect is creating and less about the poetics, choice of brick or details of their design.

My question to the project partner panel at the conference: 'Community engagement on climate change is now possible, but once the developers turn up, then its focus shifts to profits, profits, profits: how do we make sure these ambitions become requirements in projects?' was left unanswered.

Cradle to Cradle Network (C2CN) an *Interreg project* may have some answers; one work package generated guidance on Governance for development control.<sup>9</sup>

The answer from the audience (probably also project partners) was 'Gentlemen's Agreements', but I need something more robust than that; 'Covenants' (in the UK that means binding requirements associated with sale of land, obligations on the purchaser of land) that sounds better, my reply to the panel was 'Contract Specifications'. I leave this as a challenge for Future Cities.

Please create model robust specification clauses that can be included in contracts that can survive Value Engineering and Specification Substitution. "If it not in the Spec I'm not doing it". GreenSpec are keen to work with Future Cities to create them!

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[www.greenspec.co.uk](http://www.greenspec.co.uk) [www.greenspecdownload.co.uk](http://www.greenspecdownload.co.uk)

<sup>8</sup> <http://www.future-cities.eu/>

<sup>9</sup> [http://www.c2cn.eu/sites/default/files/C2C\\_PS\\_governanceC2C.pdf](http://www.c2cn.eu/sites/default/files/C2C_PS_governanceC2C.pdf)

# Re-thinking Cities

*Annette Hards and Andrew Stuck - report on their findings from the Future Cities Conference. Their professional experience is diverse but focused on the imperative to create more sustainable places, socially, economically and environmentally that can improve people's quality of life and wellbeing.*

We recently attended the final conference of the *Future Cities* partnership, a European programme about adapting urban environments in response to the challenge of climate change involving eight municipalities and other organisations from northern Europe, which took place in Hastings at the end of February. The partnership chose "Enjoy adaptation" as their leitmotif, seeing the projects as a series of opportunities to be embraced, rather than problems to be solved.

The event, quite rightly, celebrated the achievements of the programme, but also raised in our minds a number of questions about the legacy of such an initiative; how the skills and knowledge gained and the lessons learned as much by what didn't work as planned, as by what did, can be shared and disseminated more widely.

Information about the individual projects, which were presented at the conference, can be found on the programme's website; they varied widely in scale and focus, but all shared the ambition to develop, test and implement measures to make their cities and city regions better able to cope with the effects of climate change, in particular, flooding and the heat island effect in urban areas, to address making best use of energy, materials and other resources in new and existing developments, and to improve the urban environment.

## **The 'Adaptation Compass'**

One of the key outputs from the programme is a computer aided tool 'The Adaptation Compass'. This has been developed to assist organisations to work collaboratively to assess the vulnerability of their area to climate change, and then develop joined up policies and practice, putting in place adaptation measures to combat the effects of climate change. The tool includes a catalogue of adaptation options, based on a range of measures tested through the *Future Cities* programme. In essence, this tool provides a framework for the engagement of stakeholders in the process of ensuring that our urban areas are adequately equipped to not only withstand, but potentially benefit from, the impacts of future extremes of climate. This tool is freely available online.

The Conference reviewed a number of other tools developed through other EU partnerships that deal with responding to climate change. Whether, as an outsider with no prior knowledge, not involved in developing such tools, would one genuinely find any of them accessible and useful?

## Learning and legacy

For several European cities in the programme, implementation of pilot schemes appeared considerably quicker and easier to achieve. Whether this is because their bureaucracies are smaller and many have a directly elected Mayor, with a full range of powers, or whether they have greater citizenry involvement in the tool development, is difficult to judge from a UK standpoint. Culturally the UK is very different from the rest of the EU, and it was clear that partnership working between levels of government was key in the UK setting.

East Sussex County Council are piloting a local adaptation pilot including a range of private and public sector partners, recognising that different impacts may befall different localities – one place may suffer drought, while close by another may flood. The costs of such impacts are often under-estimated as people overlook the burden placed on social services in areas badly affected by flooding. Worryingly, there appear to be few urban adaptation strategies in place and key gaps include a lack of political will, awareness or competency, knowledge and insurance.

There was a huge number of technical case studies that had been collected together through the *Future Cities* Partnership providing a rich resource<sup>10</sup> of practical ideas for cities to undertake in their climate adaptation strategies, but this also made it clear that there were fewer case studies of more sociological approaches that might have been more accessible to those who weren't part of a 'city bureaucracy', instead working at a NGO or community led level. One such sub-city level initiative was led by the Town and Country Planning Association in a group with the acronym 'GRaBS'<sup>11</sup> that included tools for partners to identify social and community facilities.

The Joseph Rowntree Foundation (JRF) has also been working with residents in some of their own estates, in championing community resilience under a project called the "Good Life initiative". Vulnerability for climate change appears to fall mostly on the poor, who may be the least able to 'prepare, repair and restore' their communities. The JRF initiative helps to support their adaptive capacity, to encourage local networks, to simply to look out for each other to combat isolation.

Engaging residents in a collective collaboration is a motivational strategy that works, and this was also echoed by the city of Arnhem in the Netherlands, where they had brought together industry leaders to champion climate change adaptation technologies.

## Tools for the future?

When a crisis does happen, which of these many tools will we reach for? It's true that many tools are about gearing us to being better prepared for the consequences of climate change, but we feel it is likely to be the simplest that will prove to be the most popular. Already there are a number of other EU projects that have been developing climate adaptation toolkits too. What we need to establish is which of these tools and toolkits embraced citizen engagement and involvement in the tool development, for it would seem that collective collaboration is the motor to success.

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<sup>10</sup> *Adaptation Compass and Supplement* <http://www.future-cities.eu/project/adaptation-compass/>

<sup>11</sup> *GraBs* – Interreg VIC Project, Green and Blue space for adaptation for urban cities and eco towns <http://www.grabs-eu.org/>

**Annette Hards** - Associate of *Rethinking Cities*, is an architect, who has spent the last twelve years working more as an educator than a designer, encouraging and enabling clients, stakeholders and the wider community to participate meaningfully in the process of change in the built environment.

**Andrew Stuck** - Founding Director of *Rethinking Cities*, has a background in sustainable transport and in creating learning opportunities for young and old, lay and professional community stakeholders around the topics of active travel, quality of life and wellbeing.

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## **'Rethinking Cities' ~ Forging bridges across professional silos**

*Rethinking Cities* occupies a special niche set against the social enterprise world. It's run as business but with a strong social purpose that clearly has the 'public interest', individual and community wellbeing at the heart of what it does. Andrew Stuck, Managing Director, who set up *Rethinking Cities*, outlines some of the work that increasing numbers of public sector professionals are inviting them to do, adopting in amongst other things, their innovative 'workshop' technique.

If I sum up what we do in a sentence, it is bringing community stakeholders and professionals together to share a common understanding, learn from each other and collaborate to improve local neighbourhoods. You could say we contribute to the development of 'social infrastructure', to use the jargon. This is about building capacity and strengthening multi disciplinary teams. We do this in the belief that design plays a key part in our lives, and good, well-designed neighbourhoods create the opportunity for convivial and nurturing environments that improve the wellbeing of all.

Our activities are all geared as creative workshops and walks, where people work together to observe and share learning and expertise. We often work in small intimate spaces or adopt the 'walk' as the means of learning.

My involvement in designing and leading many participative walking events for festivals<sup>12</sup>, in the UK, Europe, Australia and Canada, convinced me how powerful the walking context is for individual and group enlightened thinking, learning through enjoyable leisure-led activities. It was also one of the reasons I set up the resource, *The Museum of Walking*<sup>13</sup> and coined the concept of 'walking creatives'.

**'Every walk is a learning walk'** - Walking, offers up a completely different set of dynamics for social interaction and learning. It frees up and promotes much more open and reflective

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<sup>12</sup> Andrew Stuck was one of the four people who conceived the *Sideways Walking & Art Festival* that took place in 2012. He has previously contributed workshops and participative activities in Australia for the City of Moreland 2011 and Melbourne in 2008, and was a contributor to the Toronto Youth Forum in 2007.

<sup>13</sup> *Museum of Walking*, was created by Andrew Stuck while a resident artist at the Banff Centre of Arts, Canada in September 2007 where he also began publishing podcasts at <http://www.takingwalking.net> as a virtual resource,

thinking. We are still discovering and developing the diverse applications of this approach, which is very exciting. It has huge potential for organisational development, team and partnership development days. We feel we've developed something to the point we 'know it works'. Naturally this involves placing and working with a high degree of trust on the part of clients. Given the feedback has been astonishingly positive, it reinforces our confidence and the creative boundaries of what can be achieved.

Over the years we have led projects for housing, public health, and local authority clients and drawing on our own experience, and applying our skills, we design devise opportunities for learning. This is, for us, about understanding and harnessing the processes that go beyond what is involved in the more typical, room-based, workshop facilitated sessions. Clients work with us to plan and implement a range of interventions that contribute to their residents' wellbeing. Examples range from creating spaces for children to play, to places for the elderly to reminisce, and for families to thrive and individuals to be happy where they live. These examples probably resonate with everyone as things we value, and appreciate; but how often are they actually planned in as core 'deliverables', as important outcomes that contribute to our quality of life?

Drawing on work in urban and suburban settings, *Rethinking Cities* has devised a flexible short training course for community stakeholders and professionals and a taster workshop on how to "weave wellbeing into neighbourhoods". This is how it works.

**On the workshop:** participants in small groups, walk through a mix of neighbourhoods, observing and critiquing those elements they feel contribute to or detract from the wellbeing of residents, and receive a debrief offering our experienced professional insights.

**The training course:** builds on this workshop experience and introduces participants to the value of incorporating wellbeing in planning their work, and how to incorporate wellbeing in the detail. The course also offers help with how to build community resilience, establish sustainability, and create a nurturing environment around where people live.

As more integrated thinking and working evolves across the public sector, commissioners of 'public health' outcomes are increasingly seeing our work, staged within events, and festival programmes as of great value to communities, encouraging and promoting physical and mental well-being. In terms of where we'd like to go next, we are now particularly keen to develop what we do through a longer term (2-3 year) programmatic commitment. This with the right kind of backing will mean we have the opportunity to build in metrics, to really capture and evaluate some of the learning and outcomes, applied to particular geographical areas and communities. [If you are interested in supporting us and developing this with us, as part of your 'wellbeing' challenges, please do get in touch.]

**Experience a 'workshop' for yourself** Our next 'weaving wellbeing workshop' takes place on Tuesday 21 May in London's EC1 <http://www.rethinkingcities.net/news/story/?item=86>

These workshops can be developed for *any* neighbourhood, so again please get in touch if you would like to have a workshop in a neighbourhood near you!



# The Behavioural Economics of Owning A Car

Stephen Young shares his thoughts on car ownership



I used to think that I owned a car because I needed it. Until I realised that I'd stopped thinking about it – I had switched into default mode, and using the car had become a habit. I knew that owning a car was convenient some of the time. And sometimes, for some journeys, the car was a time-saver. But I decided I ought to have a proper think about my car. Being an economist, this meant carrying out a cost benefit analysis,

weighing up the pluses and the minuses of owning a car. I thought about the journeys I made, added up the financial and other costs of car ownership, and then concluded that I didn't need to own a car: I could meet most of my travel needs more cheaply and with less hassle using other modes of transport – whether bus, taxi or train. And many of the things that I thought meant owning a car could be met by using better solutions – like hiring a car or a van. So I got rid of my car. That was in 1995, and I haven't owned one since (nor has anyone else in my household).

I'm happy with being carfree: I'm saving money, time and hassle. I relish the freedom. My wife and I are busy, with economically active lives: like other people, we work, we shop, we travel, we go out. Unlike most other people, we do these things without owning a car. So we are now richer, fitter, thinner, happier, and more relaxed. And we are also a deeper shade of green: if there were fewer cars on the road we would all be better off, and we'd all get a share of the benefits.

A while ago I began to wonder why it was that if I could see this, why couldn't other people? Not people who need their own motorised transport because of their jobs, or because they lived in remote rural areas. But why don't the rest of us use the standard economic model and carry out some basic economic analysis? How come more people don't undertake an evidence-based evaluation of the costs of car ownership: not just the financial costs but also the implications for weight gain and other factors, including the health consequences, the increased stress, and the risks of car travel. So I started to think about this question from a new perspective – with the use of behavioural economics, which I teach in the Business School at Brighton University.<sup>14</sup>

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<sup>14</sup> For a more detailed review of the application of behavioural economics and social marketing to the Wicked Problem of car dependency, see Young, S., and Caisey, V. (2010) *Mind Shift, Mode Shift. A Lifestyle Approach To Reducing Car Dependency, using Behavioural Economics and Social Marketing*. Perspectives in Public Health. London: Royal Society for Public Health. May 2010. February 11, 2010 <http://rsh.sagepub.com/cgi/rapidpdf/1757913909354151v1>

## Behavioural Economics – Putting The Humans Back Into Economics

Behavioural economics is an emerging subfield of economics that incorporates insights from psychology and other social sciences into economics. It's a way of thinking about decision making under conditions of uncertainty – which applies to most decisions that we humans make. It uses empirical and laboratory evidence which shows that people often behave in ways that differ from the key assumptions of standard neo-classical economics. Key concepts include loss aversion, problems with self control, and concern for what others do, as well as the fact that we tend to use heuristics, or rules of thumb, that, unbeknown to us, often underpin our decision making and guide our behaviour. Behavioural economics is entering the mainstream in both the public and commercial sectors, and has become more prominent due to the publication of popularising books such as "Nudge" by Richard Thaler and Cass Sunstein, "Predictably Irrational" by Dan Ariely, and "Thinking Fast and Slow" by Daniel Kahneman.

The idea that some agents in the economy are not only human, but behave as such was recognised by the economics establishment in 2002 when a Nobel Prize was awarded to the Princeton University psychologist Daniel Kahneman, *"for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty"*. As explained by two of its foremost exponents, *"Behavioural economics increases the explanatory power of economics by providing it with more realistic psychological foundations."*<sup>15</sup> From a practical perspective, this means using research on human and social cognitive and emotional biases to better understand the rationality or lack of it, of decisions made by economic agents – you, me, and everyone else. Using behavioural economics enables us to recognise that *"People live in difficult environments with poor information; they are prone to error, emotion, and self-interest, and often fail to maximize their own long term best interests...."*<sup>16</sup>

Economists who operate within the neo-classical paradigm consider that the motivations which underlie individual behaviour can be incorporated into a standard set of assumptions: this enables them to move on to consider their real subject matter: what happens in markets. Economics has assumed that people are mechanistic agents who follow a given set of behavioural rules. As Nick Wilkinson<sup>17</sup> explains, the Standard Economic Model assumes that people are:

- rational
- motivated by expected utility maximisation
- governed by selfishness, and do not take into account the utility of others
- Bayesian probability operators
- consistent with their time preferences according to their discounted utility
- liable to treat all income and assets as fungible



<sup>15</sup> Camerer C, Loewenstein G. Behavioural Economics: Past, Present, Future. In: Camerer C, Loewenstein G and Rabin M, editors. *Advances in Behavioural Economics*. Princeton: Princeton University Press, 2003. p3

<sup>16</sup> Rothschild, Michael L. (2001) *A Few Behavioural Economic Insights for Social Marketeers*. Social Marketing Quarterly, 2001

<sup>17</sup> Wilkinson, Nick (2008) *An Introduction to Behavioural Economics*. Basingstoke: Palgrave MacMillan p5

So conventional economics would predict that, since people’s behaviour echoes these assumptions, they would carry out a cost benefit analysis of car ownership. By contrast, behavioural economics challenges these frequently unrealistic assumptions about individual behaviour – as the former editor of the Economist has written, “Economics is not about models and mathematics, it is about behaviour: our reactions to opportunities, risks and fears.”<sup>18</sup>

Or as Charlie Munger, business partner of Warren Buffett has said, “If economics isn’t behavioural, I don’t know what the hell is.” (*The Psychology of Human Misjudgement – Speech at Harvard Law School, 1995*)

## Two Systems of Behaviour

Underlying behavioural economics is the idea of a dual-system model of human behaviour. Such models are found in philosophical discussions of human behaviour dating back to the ancient Greeks - in *The Republic*, Plato contrasts the immediacy of desires as short-sighted attractions to particular classes of things, with the broader scope of reason, whose function in the human soul is to “rule with wisdom and forethought on behalf of the entire soul.”<sup>19</sup> Such ideas have come to the present day via many other thinkers, from Adam Smith to Sigmund Freud, and the most recent expression of dual system behaviour is in Daniel Kahneman’s *Thinking Fast and Slow*. If we modelled human behaviour at the extremes, we would emerge with two archetypes: the rational deliberations of *homo economicus* versus the more untidy reality of *homo sapiens*. The former is a rational deliberator who has stepped from the pages of a standard economics textbook; the latter is a more realistic human, who may, or may not, make the right choices.

**Table 1: Two Systems of Behaviour in Practice**

Reflective	Automatic
Thinking	Emotional
Planning	Doing
Brain	Gut
Rational	Intuitive
Controlled	Uncontrolled
Effortful	Effortless
Deductive	Associative
Cold	Hot
Slow	Fast
Patient	Impatient
Self-aware	Unconscious
Long term	Short term
Deferred gratification	Immediate gratification
Conscious thought	Your native language
Your second language	“We’re all going to die”
“The turbulence is bad, but planes are safe”	Homer Simpson: your inner lizard
Mr Spock: the rational calculator	

<sup>18</sup> Bill Emmott, writing in *The Guardian*, 3.1.09

<sup>19</sup> Cited in Loewenstein, George F. and O’Donoghue, Ted, *Animal Spirits: Affective and Deliberative Processes in Economic Behavior* (May 4, 2004).

## Behavioural Economics and Car Ownership

These two systems are caricatures: some of us behave at the extremes some of the time, but most of us, most of the time, behave somewhere in-between (even economists). The challenge is to recognise when cognitive and psychological biases sometimes prevent us from making optimal choices. And then reconcile these biases to the analytical rationality shown by the standard model of economics. So if we don't use the standard economic model to think about car ownership, can we use behavioural economics instead?



The following table uses some technology from behavioural economics to reconsider car ownership – from framing to defaults, thinking about salience, considering the role of loss aversion and the endowment effect, and hunting the heuristics,. It shows how we can use insights from behavioural economics to illustrate the systematic biases that influence our behaviour, and show how these psychological factors, cognitive biases and heuristics can be applied to the ownership and use of cars.

**Table 2:  
Some Concepts from Behavioural Economics Applied to Car Ownership and Use**

<b>Concept from Behavioural Economics</b>	<b>Explanation of Concept</b>	<b>Example</b>	<b>Applied to Car Owning and Use</b>	<b>Applied to Re-position Car Owning and Use</b>
<b>Framing</b>	We are sensitive to the <i>framing</i> , or formulation, of the decision problem. The presentation of the data is as important as the data itself.	People are greatly influenced in their decisions by how choices and options are presented – as marketers know and use.	<i>"Although I know that my car is probably bad for the planet, I didn't know that it probably isn't good for me."</i>	Car owning and use is not just about the impact on society and environment; it's about the personal costs - which may outweigh the benefits: is owning a car good for the car owner?
<b>Choice Architecture</b>	Choice architecture can make it easier to make optimal choices.	It can be difficult to find out about alternatives to the car.	<i>"I don't even think about it, I just jump in the car."</i>	Provide better transport information and make it accessible, eg via ICTs.
<b>Defaults</b>	If the default is set right, the	Public transport seems more difficult	<i>"I don't even think about optimal"</i>	Change the default: don't automatically

	individual does not need to choose a decision.	and inconvenient than jumping in the car.	<i>choices for my journeys – I own a car, and use it all the time.”</i>	own a car; could carfree be a better option?
<b>Salience and Sunk Costs</b>	Paying cash now is painful.  If the cost is already incurred, you might as well forget about it.	Train and bus tickets are expensive compared with the cost of fuel for each car journey.	<i>“Public transport is expensive. My car cost a lot to buy, but now I’ve got it, I’ll use it.”</i>	Start thinking about how much it costs to own and run a car, not just the fuel. A car owner is generally £000’s worse off than a non car-owner.
<b>Hyperbolic discounting; intention vs action</b>	Freedom and convenience is now; the disadvantages are incremental, cumulative and far off.	The cost of an unhealthy lifestyle is in the future - the pleasure is here and now.	<i>“Soon I’ll drive less; right now, I’ll jump in the car.”</i>	People need to get benefit now from changing lifestyle. <sup>i</sup> We need help to make and stick to commitments.
<b>Status Quo bias</b>	Keep on doing it, unless there are massive incentives to change.	Even if the costs of making a change are low and the benefits are high, people often do nothing rather than actively make a change.	<i>“I always use the car – what’s to think about?”</i>	Make it easier to give up owning and using a car. Join a carclub; hire a car when needed.
<b>Optimism Bias</b>	We persistently over-estimate the likelihood of positive events and under-estimate the likelihood of negative events.	Overconfidence makes us overestimate our own logic, discipline and/or abilities. Heavily exploited in the marketing world.	<i>“This journey only takes me n minutes by car.  I’m a better than average driver.”</i>	People consistently under-estimate time spent on car trips and over-estimate time spent on public transport equivalents. People don’t count all of the time spent looking after a car and keeping it on the road. Everyone thinks they are better than average: this cannot be valid.
<b>Loss</b>	Humans prefer	People are loss	<i>“No-one is going to</i>	Create a sense of

<b>aversion</b>	not losing to winning. Empirical estimates find that losses are valued about twice as strongly as gains. Studies of happiness show that a drop of income hurts our well-being more than the equivalent gain serves to increase our happiness.	averse, and tend to place a heavier value on losses than on gains.	<i>take away my car, or prevent me from using it when and where I like."</i>	ownership and shared pride in public transport – eg feature local people in adverts on the side of buses; emphasise the benefits of models other than car ownership such as car clubs, car pools etc.
<b>Endowment Effect (aka Divestiture Aversion)</b>	People tend to value a good or service more once they own it: it's hard to give up something you own – even if doing so would make you better off.	Parting with an already owned good is seen as a greater loss than the potential gain from acquiring another good of equal real value. "A bird in the hand is worth two in the bush."	<i>"I love my car."</i>	Why own an asset (car) that's only used for an hour a day?
<b>We are Social Beings - we follow the</b>	The actions of those around us affect our	It matters what others do – whether they are our peer groups or our role	<i>"Everyone owns a car, except losers and weirdos."</i> <sup>20</sup>	There are some cool people out there who don't own cars.

<sup>20</sup> Carfree living is easier if you live in a town or city, where there are better alternatives to the car. The UN has stated that 2008 was the first year in which more than 50% of the global population was urban, and within a decade, the figure is expected to be 80%. At present, choosing not to own a car is not the norm: the UK Social Trends survey showed in 2007 that the percentage of households with no car fell from 48% in 1971 to 25% in 2004, the lowest figure ever. But Professor Phil Goodwin, who has written extensively on the phenomenon of Peak Car, noted in early 2011, "*Car use in Britain is on the decline, but no one is exactly sure why.*" Goodwin points to evidence that, in the UK, fewer young people are learning to drive: between 1992 and 2007, the number of 17- to 20-year-olds who held licences fell from 48% to 38%, and for 21- to 29-year-olds, the number fell from 75% to 66%. Further evidence came from reports in February 2012 about booming sales of discount cards for coach and train travel amongst young people in the UK, put off of owning and driving cars by the escalating costs. Combined with a decline in private transport's share of trips from 50% in 1993 to 41% in 2008, and a 9% reduction of car trips per person between 2004 and 2008, this could mean that car ownership and use has already peaked. Similar phenomena have been reported across Europe, and in countries such as Australia and Japan. Even in Canada, one researcher has found that driving in the nation's five largest cities, combined, declined by 1.7% per capita from 1995 to 2006. (Other references to the Peak Car phenomenon in the Financial Times and The Economist at <http://www.ft.com/cms/s/0/33a66a4a-736a-11e2-9e92-00144feabdc0.html> & <http://www.economist.com/node/21563280>. A report from the RAC Foundation is at <http://www.racfoundation.org/research/mobility/on-the-move-main-research-page>

<b>Herd</b>	behaviour.	models.		
<b>Risk and Probability</b>	People have an asymmetric risk appetite, being risk-averse in the domain of winning, but risk-seeking in the domain of losing	Keep on driving – it's safer than the alternatives.	<i>"Cars are safe, and I'm in control. I have a very low chance of being in a car crash."</i>	The chances of being killed or maimed in a car are much higher than most people think. <sup>21</sup>
<b>Heuristics</b>	Conscious and unconscious rules of thumb which guide our behaviour: shortcuts we take to make decisions.	In their paper <i>"Judgement under Uncertainty,"</i> in 1974 Tversky and Kahneman cite three heuristics: (i) Representativeness: decisions are made on likeness to previous outcomes (ii) Availability: the likelihood of an event is assessed by the ease with which it can be recalled. (iii) Adjustment/anchoring: people make judgements based on having a reference point (where they start from). <sup>22</sup> We can now add other heuristics to this list.	<i>"Cars are quicker; public transport is inconvenient, slow and expensive; the cost of each car trip is the cost of the petrol."</i>	Trains and buses are quicker and more reliable than they were. One bad experience on public transport is not representative.
<b>Libertarian Paternalism</b>	It's your choice.	Don't coerce: let people choose what they are going to do.	<i>"I own a car, and I'll use it."</i>	Provide sticks and carrots to nudge people away from car ownership and use.

<sup>21</sup> The 75 year (lifetime) risk of dying in a car crash in the UK is 1 in 976, according to the independent medical researchers Bandolier <http://www.medicine.ox.ac.uk/bandolier/booth/risk/transporttrav.html>

<sup>22</sup> Tversky, Amos and Kahneman, Daniel (1974) *Judgment under Uncertainty: Heuristics and Biases*. Science, New Series, Vol. 185, No. 4157. (Sep. 27, 1974), pp. 1124-1131

## Conclusions



Conventional economics says that having access to the right information facilitates optimal decision making, which may be true if your decision making follows the model of rational optimising practised by Star Trek's Mr Spock, or Sheldon Cooper from The Big Bang Theory.

But behavioural economics shows that even if you can get the right information, you might not make the right decision. Individuals often make choices about car ownership and use which are not optimal. Behavioural economics, by shedding light on our conscious and unconscious motivations, can help explain why people don't always think rationally about car ownership.

## Biography

Stephen Young is an Associate at Global to Local, and subject leader for behavioural economics at Brighton Business School, University of Brighton, where he is a senior lecturer in economics. Stephen is also Visiting Lecturer at Brighton & Sussex Medical School, where he teaches behavioural economics to health professionals. Stephen advises, consults, presents and writes about markets, strategy, policy and regulation, with a focus on behaviour change and sustainability.

Stephen is Chair of Living Streets Brighton and Hove Group, and sits on Brighton and Hove City Council's Transport Partnership.

His website is [www.stephenyoung.org.uk](http://www.stephenyoung.org.uk) and his blog 'Life Outside the Box' is at <http://bit.ly/9pC02P>. He is currently writing a book about carfree living.