

Understanding the co-evolution of material, social, economic, cultural, political change

The Manchester Architecture Research Centre (MARC)

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is Professor of Architecture, Director of MARC and Head of the School of Environment and Development at the University of Manchester, UK. His research explores the co-evolution of design and development strategies and socio-technical-ecological processes that mediate urban futures. His work engages with interdisciplinary approaches to sustainable urbanism, engaging with changing forms of architectural knowledge and practice and specifically with debates about buildings, networks and cities across diverse geographies.

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Ralf Brand

is Senior Lecturer in Architectural Studies and employs a socio-technical approach to the study of the built environment. He is interested in a synchronisation of social, technical and institutional change towards sustainable development. He is co-responsible for research projects on the use of energy efficient heating technologies by older people and on imagined social practices in zero-carbon homes. He also works on issues around co-existence in space of different religious and political groups and initiated the mailing list BESTS (Built Environment & STS).

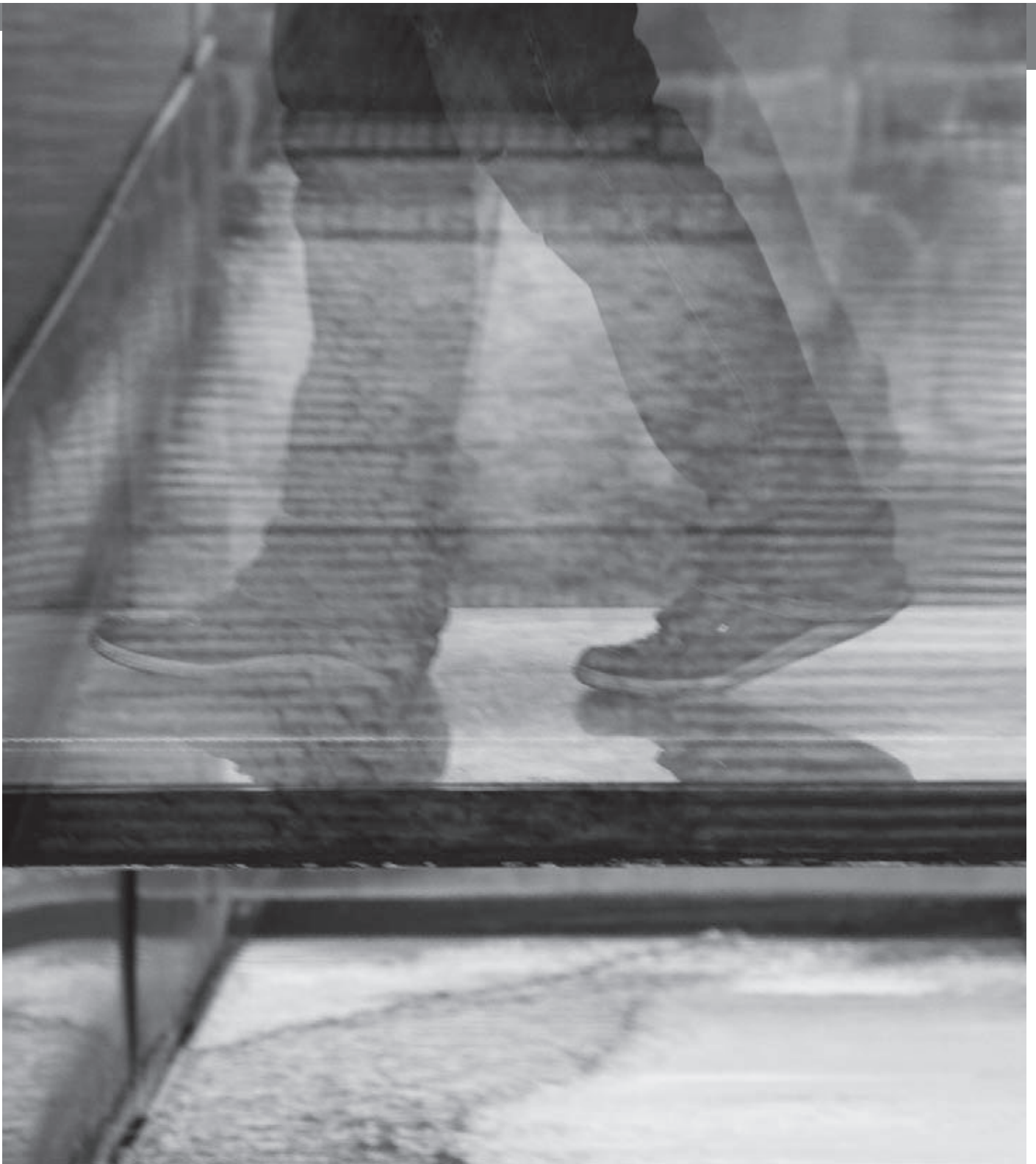
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About MARC

MARC was established following a review of Architecture as part of the process of establishing the new University of Manchester in 2004; an amalgamation of the Victoria University of Manchester and UMIST (University of Manchester Institute of Science and Technology). The centre draws upon a wide range of interdisciplinary research and teaching interests within

the School of Environment and Development, the Faculty of Humanities, the University and the Faculty of Art and Design at the neighbouring Manchester Metropolitan University, through the joint Manchester School of Architecture (msa). Exploiting its unique institutional position to connect design studies and social sciences, MARC aims to establish msa as a centre of international excellence for research and teaching on the social studies of architecture. MARC is developing a research agenda that aims at critically understanding the co-evolution of design and development strategies and socio-economic processes shaping cities and buildings. Dissatisfied with conventional interpretations of architecture as either isolated aesthetic (art), technological (engineering) or economic (property) objects, MARC aims to connect architectural research with the social sciences (sociology, psychology, cultural studies, anthropology and political sciences) to explore relations between architecture and society. This





approach involves: the development and application of an innovative socio-technical approach to researching architecture, urban development, technological innovation and urban change; analysis and integration of previously disconnected research fields – architecture and urban planning, the property sector and utilities industry – and the stimulation of a collaborative, inter-disciplinary methodological approach to architectural research.

MARC Research

Our research looks beyond design as an aesthetic or technical object to the

complex processes and practices that run through the development, adaptation and use of built environments. Our research approach is mainly inspired by a socio-technical and relational ontology which takes as a starting point the notion that the built environment is one of many nodes in a complex network of human and non-human factors. In this sense, our work is anti-essentialist but rather traces the links in this network to wherever they lead. Our cumulative expertise also includes approaches from architecture (in a more conventional sense), geography, environmental psychology, urban plan-

ning, sociology, political science and historic preservation. This wide range of knowledge is represented by the truly interdisciplinary background of our extremely international team. Our six permanent staff members are from the UK, Algeria, Bulgaria, Germany, Belgium and Argentina. Our team is complemented by five research fellows and associates and a number of affiliated scholars from other disciplines such as architecture, geography and planning.

While we work on a variety of issues and projects, our research overall pursues three main themes:

■ **Unpacking design:** Our interdisciplinary research agenda aims to unpack the production and consumption of buildings, public spaces, neighbourhoods, infrastructures and cities by following the co-evolution of design and the human, technological and ecological entities that compose built environments. The research theme “unpacking design” is inspired by the frequently cited metaphor, that the technical, social, economic, institutional, psychological “come as a package”. This is to say that these factors can never be understood in isolation because they are intricately linked, they constantly react to each other or, in other words, they co-evolve. Much of our research is therefore trying to untie these bundles of factors that influence the final design of buildings, public spaces, infrastructures and cities. The results highlight the multiple and often competing demands on design by a wide range of stakeholders.

■ **Following design:** Drawing upon a wide range of social science methods, we seek to prise open the “black box” of finished buildings, spaces and infrastructures by following their adaptation to diverse social, political, economic and environmental challenges. Our projects draw on various empirical case studies, covering fieldworks in architectural offices or studies of urban design and development processes, local communities and large metropolitan settings. We use a variety of interdisciplinary methods and fieldwork-based approaches to tackle design in the making, design networks and processes, design cognition and visualisation, urban artefacts, controversies and city dynamics, co-evolution of cities and technical networks, urban innovation and socio-technical change, negotiations in design and city planning, political and ethical issues in architecture, public reactions to technologies and innovation, etc.

■ **Engaging design:** Our research engages directly with the situated practices of designers, developers, planners, engineers, policy-makers, citizens and communities who develop, maintain, manage and use our built environments across geographical and cultural settings. Collectively, MARC’s research is developing and applying theoretical and methodological insights from a range of disciplines to develop socio-technical perspectives on architecture and urban change. MARC projects cover a diverse range of topics: from ‘new urbanism’, design and develop-

ment of Manchester, thematic study of railway station design, tall buildings, museum architecture, design thinking and controversies, through to ‘co-evolution’ of technological innovation and behavioural change, to sustainable architecture, and community involvement and public engagement with renewable energy technologies and electricity networks.

Research Projects

MARC has been successful in securing funding from external funding bodies. MARC’s current research projects include:

■ Climate Proof Cities

Principal Investigators: John Handley, Jeremy Carter • Funding: Knowledge for Climate Dutch Consortium, the Netherlands

■ Climate Science in Urban Design

Principal Investigators: Michael Hebbert, Vladimir Jankovic • Researchers: Brian Webb • Funding: ESRC (Economic and Social Research Council)

■ Challenging Lock-in through Urban Energy Systems (CLUES)

Principle Investigator: Yvonne Rydin (UCL) • Co-investigators: Simon Guy, Chris Goodier, Lester Hunt, Jim Watson, Patrick Devine-Wright • Funding: EPSRC (Engineering and Physical Sciences Research Council) Programme – Towards a Sustainable Urban Environment: Integration Across Scales

■ Conditioning Demand: Older People, Diversity and Thermal Experience

Principal Investigator: Simon Guy • Co-investigators: Ralf Brand, Patrick Devine-Wright, Chris Tweed, Gordon Walker • Research Officer: Andrew Karvonen • Funding: EPSRC/EDF Energy Programme (People, Energy and Buildings)

■ Community and Institutional Responses to the Challenges Facing Poor Urban People in an Era of Global Warming in Bangladesh

Principal Investigator: David Hulme • Co-Investigators: Manoj Roy, Simon Guy • Funding: ESRC Area and Development Studies and Environmental Planning

■ EcoCities: The Bruntwood Initiative for Sustainable Cities at the University of Manchester

Principal Investigators: Simon Guy, John Handley • Researchers: Jeremy Carter, Aleksandra Kazmierczak, Gina Cavan • Funding: Charitable donation from Bruntwood and the Oglesby Trust

■ Green and Blue Space Adaptation for Urban Areas and Eco Towns (GRaBS)

Principal Investigator: Jeremy Carter

• Researchers: Simon Guy, John Handley, Richard Kingston, Sarah Lindley, Aleksandra Kazmierczak, Gina Cavan • Funding: INTERREG IVC – Priority 2: Environment and Risk Prevention (sub-theme: Natural and Technological Risks)

■ Multi-Faith Spaces as symptoms and agents of religious and social change

Principal Investigator: Ralf Brand

• Researchers: Andrew Crompton, Chris Hewson, Terry Biddington • Funding: AHRC (Arts & Humanities Research Council), Religion and Society Programme

■ Zero-Carbon Habitation

Principal Investigators: Simon Guy, Gordon Walker • Co-investigator: Ralf Brand • Funding: ESRC/DEFRA (Department for Environment, Food and Rural Affairs)

Project Examples

MARC currently has a particular focus on processes and practices of urban adaptation in response to climate change. The EcoCities project, funded by Bruntwood and The Oglesby Charitable Trust, seeks to create a climate change adaptation blueprint for the Manchester city region, based on the analysis of climate change scenarios and the proposal of appropriate adaptation responses. The work also draws on the expertise of the Centre for Urban and Regional Ecology (CURE) and the Brooks World Poverty Institute (BWPI), and benefits from a strengthening partnership with Manchester City Council. EcoCities will facilitate the exchange of best practice and mutual learning with developed and developing world cities, and a network of international links is being established. Joint research between BWPI and MARC has begun into climate change and poverty in urban Bangladesh. Links are also in development with institutions in Singapore, Nagoya, Osaka, and Austin, Texas.

Another project studies so called **Multi-Faith Spaces as symptoms and agents of religious and social change**. This title reflects a socio-technical understanding of our built environment as both socially shaped and shaping. Such spaces are often found in airports, hospitals, universities, shopping malls and similar places; but also in football stadiums, prisons, cruise ships, crematoria, youth clubs. Multi-Faith Spaces usually come with a daring ambition, namely to accommodate divergent worldviews in a concrete material setting. While a lot has been written about such

attempts of interfaith dialogue from a theological perspective, very little is known about the design, ornamentation and orientation, colour, security, scheduling, cleaning and – most importantly – usage of these spaces. We want to know whether such space are tangible manifestations of tolerance and pluralism, whether they are constructed to promote narrow socio-political agendas (i. e. 'cohesion' or 'inclusion' policies), whether they effectively promote interaction or whether they merely house difference.

The project **Conditioning Demand: Older People, Diversity and Thermal Experience** follows two key forms of future change: the demographic trend of an ageing society and the adoption of energy-efficient technologies. The research team includes researchers at four UK universities (Manchester, Cardiff, Lancaster, and Exeter) as well as EDF Research and Development who are investigating the issue of energy consumption as it relates to 'thermal experience' in domestic settings in the UK and France. The project team is interviewing older residents across a range of living situations and socio-economic categories, collecting data about the spatial and material aspects of thermal experience, and interviewing actors engaged in the promulgation of the energy-efficient technologies such as energy modellers, technology designers, installers, and building maintenance personnel. The project findings will be relevant to a diverse array of academic and non-academic stakeholders. The project is funded by the Research Councils UK Energy Programme and ECLEER (European Centre and Laboratories for Energy Efficiency Research).

Mapping Controversies in Architecture is a research method and teaching philosophy that allows the traditional divides between nature and culture, architecture and society to be crossed. It offers a new methodology for following debates surrounding contested urban knowledge. Engaging in explorations of on-going and recent controversies and re-visiting some well-known debates, the project foregrounds, traces and maps the changing sets of positions triggered by design: the 2012 Olympics stadium in London, the Welsh parliament in Cardiff, the Heathrow airport runway extension, the Sidney Opera House, the Eiffel Tower. By mobilizing digital technologies and new computational design techniques we are able to visualize the variety of factors that impinge on design

and track actors' trajectories, changing groupings, concerns and modalities of action. With this methodology in hand we are able to place architecture at the intersection of the human and the nonhuman, the particular and the general. It allows its networks to be re-established and to run between local and global, social and technical. Mapping controversies can be extrapolated to a wide range of complex phenomena of hybrid nature.

Websites:

www.mappingcontroversies.co.uk and underlying EU-funded project MACOS-POL: www.mappingcontroversies.net.

Involvement in BA, BArch, MA and PhD Programmes

MARC staff lead the Humanities component in the BA programme of msa. This includes courses on issues like sense of place, the politics of design, sustainable urbanism, mapping architectural controversies and others. The MARC team also plays a leading role in the delivery of the BArch programme through courses on research design and methodology and through the supervision of the majority of BArch dissertations. MARC also holds a studio with BArch students from msa which includes an annual field trip. We also contribute to msa's MA in Architecture and Urbanism.

MARC currently has 13 PhD students who participate in our graduate studies programme and benefit from involvement in research activities of MARC.

PhD research projects focus on a range of topics including sustainable urbanism, urban design and development, socio-technical systems, places and place-making, ecological and landscape design and the conservation and management of historic environments.

Events

The dynamic atmosphere at Manchester Architecture Research Centre is reflected in various activities.

MARC hosts an exciting range of events including an annual Autumn Guest lecture series and bi-annual conference. The lecture series is open to staff, students and the public. In addition to these core events the centre hosts smaller workshops and symposia.

If you would like to be added to our mailing list please contact us at ralf.brand@manchester.ac.uk. ■

politische ökologie

Die Buchreihe für Querdenker und Vordenkerinnen

Spannungsgeladen

Die Zukunft der Energieversorgung



Weltweit stehen die Zeichen auf einer Vollversorgung durch erneuerbare Energien – umstritten ist allein, wie und bis wann die Energiewende umgesetzt werden soll. Die Lösung des Klima- und Ressourcenproblems erfordert nicht nur, den immensen Schatz von Effizienz und Suffizienz zu heben, sondern auch einen Mentalitätswechsel hin zu einer Gesellschaft, die mit weniger Energie auskommt und doch besser lebt, weil sie den Wohlstand gerechter verteilt. Die Autorinnen und Autoren der *politischen ökologie* diskutieren, wie eine zukunftsfähige, sichere und bezahlbare Energieversorgung aussehen kann und klären, wie Nutzungskonflikte zu überwinden sind.

Mit Beiträgen von F. Uekötter, I. Scheer-Pontenagel, B. Janzing, W. Schluchter, G. Hübner, H. Welzer, M. Hänggi, u.v.m.



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