

<b>Institution:</b> Lancaster University		
<b>Unit of Assessment:</b> 32, Art and Design: History, Practice and Theory		
<b>Title of case study:</b> Future cities: changing policy on places		
<b>Period when the underpinning research was undertaken:</b> 2013 to 2019		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Christopher Boyko	Lecturer	July 2006 to present
Rachel Cooper OBE	Distinguished Professor	July 2006 to present
Paul Cureton	Lecturer	January 2018 to present
Nick Dunn	Professor	September 2013 to present
Serena Polastri	Lecturer	May 2016 to present
<b>Period when the claimed impact occurred:</b> August 2013 to December 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<b>1. Summary of the impact</b>		
<p>The <i>Liveable Cities</i> research programme has resulted in a comprehensive understanding of the relationship between wellbeing and the urban environment. With new methods of designing and engineering low-carbon, resource-secure, wellbeing enhanced UK cities, the research has impacted upon the way policy makers think about and act upon the future of cities locally and nationally, specifically how they address the design of future cities in relation to improvements in the health, wellbeing and prosperity of the public over the long term.</p> <p>The research has guided the way that: i) the Government Office for Science (GO-Science) thought about future cities and health in the UK; ii) official regulatory documents are managed, in response to the Grenfell Inquiry; iii) City Councils in the UK undertake strategic city planning, and in particular Lancaster City Council; and iv) how the Connected Places Catapult approached business development and strategy.</p>		
<b>2. Underpinning research</b>		
<p>For the past 10 years there has been a recognition amongst research funders, leading academics and latterly GO-Science (2013) that research on cities had been too single discipline and silo focussed, and agreement that there was a need for more interdisciplinary futures-focussed evidence to solve the problems facing cities.</p> <p>The research led by Cooper and Dunn, and delivered by a team including Boyko, Pollastri, and Cureton, has focused on cities from a design-led perspective, with three aims:</p> <ul style="list-style-type: none"> <li>(i) to combine knowledge from science, social science and the humanities related to designing cities for improved human health and wellbeing;</li> <li>(ii) to challenge existing assumptions about these issues, such as the best type of housing density, and allocation of green space;</li> <li>(iii) to provide new evidence-based insights to aid urban decision-makers in addressing health, wellbeing and prosperity, such as planning that focuses on both density and intensity, including approaches to the night-time economy that address health and wellbeing.</li> </ul> <p>The research relates specifically to the <i>Liveable Cities</i> research programme, a GBP6.3million EPSRC initiative involving Birmingham University, Southampton University, UCL and Lancaster University, undertaken between 2013 and 2016 [G1]. <i>Liveable Cities</i> was an interdisciplinary programme involving engineers, architects, social scientists and scientists. Cooper and Dunn led research on future visions for cities, wellbeing in cities and how these issues relate to the design of cities. Our research consisted of: a) a detailed historical analysis of visual material predicting the future of cities performance; b) qualitative data collection on density, mobility, and socio-economic aspects of neighbourhoods in Lancaster, Birmingham and Southampton; and c) analysing complex data in science and social science to identify the underpinning factors affecting the design of cities, such as the relationship between environmental design and</p>		

wellbeing; the night-time economy and urban design; and the role of visions (narrative or visual) in decision-making for cities.

The wellbeing and health analysis of this programme created an evidential base which revealed the relationship between the physical environment and mental and physical health, and the importance of this relationship in urban design, planning and policy making. From this came a series of specific design interventions capable of enhancing the physical, ambient and psychological environment to ensure that it is walkable, green, clean and safe, as well as nuanced design interventions for buildings in relation to health and wellbeing [R1, R3, R6].

Research and visualisation of future cities involved engagement with industry, including retail companies such as Waitrose and utility companies such as Aecom; the heritage sector, such as National Trust and English Heritage; and local government, such as Lancashire County Council and Lancaster City Council. From this engagement came new narrative and visualisation tools, created between 2013 and 2015, capable of communicating the complex interdependencies of, and multiple perspectives on, specific city issues and futures [R4]. This work led to the UK's GO-Science Foresight Programme commissioning the researchers to undertake a further study, specifically with regard to its *Future of Cities* project (2013 to 2016). The team examined the opportunities and challenges facing UK cities over the next 50 years, specifically those related to science and innovation policy from a perspective of how future cities are visualised [R2, R5].

The body of work has resulted in new recommendations for policy makers, professionals and the public on the role of design in built and urban futures. In summary, these are: a) what design and planning decisions should include to enhance health and wellbeing in places; and b) how best to use design and visualisation to communicate and understand complex information about the built environment, urban systems and urban futures, to ensure the creation of future liveable cities for wellbeing [R4].

### 3. References to the research

[R1] Cooper, R., Burton, E. & Cooper C. L. (eds), *Wellbeing and the Environment*, 2014, edited book, Wiley-Blackwell, Volume 11, *Wellbeing: A Complete Reference Guide*. Held at HEI. *Peer-reviewed*.

Resulting from the government's Foresight Programme on Mental Capital and Wellbeing: [https://webarchive.nationalarchives.gov.uk/20140108150430/http://www.bis.gov.uk/assets/foresight/docs/mental-capital/sr-dr2\\_mcw.pdf](https://webarchive.nationalarchives.gov.uk/20140108150430/http://www.bis.gov.uk/assets/foresight/docs/mental-capital/sr-dr2_mcw.pdf)

[R2] Dunn, N., Cureton, P., & Pollastri, S. *A Visual History of the Future*, 2014, government report, HMSO.

<https://www.gov.uk/government/publications/future-cities-a-visual-history-of-the-future>

[R3] Dunn, N. *Dark Matters: A Manifesto for the Nocturnal City*, 2016, monograph, Zero Books. Held at HEI. *Peer-reviewed*.

[R4] Bokyo, C., Cooper, R. & Dunn, N. *Designing Future Cities for Wellbeing*, 2020, edited book, Routledge. Based on the complete work of the EPSRC Liveable Cities research project. Held at HEI. *Peer-reviewed*.

[R5] Dunn, N. & Cureton, P. *Future Cities: A Visual Guide*, 2020, co-authored book, Bloomsbury. Held at HEI. *Peer-reviewed*.

[R6] Lakshmi P. Rajendran, Christopher T. Boyko, Claire J. Coulton, James D. Hale, Rachel F. D. Cooper, 2020, *A Socio-Spatial Approach to Enable Inclusive Well-Being in Cities: A Case Study of Birmingham, UK*, Soc. Sci. 9, 109 <https://doi.org/10.3390/socsci9060109>. *Peer-reviewed*.

### Peer-reviewed research grants:

[G1] Rogers (PI, Birmingham University), Cooper (Co-I, Lancaster University), Bahaj (Co-I, Southampton University), Tyler (Co-I, UCL), *Liveable Cities*, EPSRC: (2013 to 2016) GBP6.3million

### 4. Details of the impact

The sustained body of research undertaken by Cooper, Dunn and the research team has contributed to:

- 1) guiding national policy makers' approach to planning, and further enabling 19 cities across the UK to undertake their own fore-sighting activities through having the confidence to think and plan for the long term.
- 2) redesigning and redeveloping official regulatory documents and systems, in response to the Grenfell Inquiry.
- 3) shaping local government thinking around strategic city planning and wellbeing.
- 4) steering the strategic direction of organisations in terms of future planning, mobilities and health and wellbeing; from the Connected Places Catapult to small and medium-sized enterprises (SMEs).

### 1) Guiding national policy makers' approach to planning

Cooper, with support from Dunn, had a 'crucial' role as a member of the Lead Expert Group (LEG) in the GO-Science Foresight project *Future of Cities* (FFC) between 2013 and 2016 [S1]. Commissioned by the government's Chief Scientific Advisor, Foresight projects have been running for 25 years; they focus on government imperatives, particularly long-term trends, challenges and implications for policy. The FFC project was championed by the Secretary of State for Communities and Local Government, Greg Clarke MP. Cooper was chosen to be part of the LEG due not only to her expertise in design, urban design and wellbeing, but also her previous extensive experience with other Foresight programme projects. The Lead Foresight manager said, "*Rachel's expertise in the fields of health, wellbeing, and urban design, alongside her wealth of experience in contributing to, and leading on, government funded projects (including an earlier Foresight project), meant she was an obvious choice for inclusion on the LEG. Rachel's role was really critical because she was one of the few people who...had a really good idea of the end result of the project should look like for best impact*" [S1]. Chairman of the LEG added that where most researchers only carry out analysis, "*Rachel's other key contribution to help the project was in inventing possible futures and it was incredibly important to have her on the group...she helped us to design scenarios and alternative plans and policies that would underpin different scenarios*" [S2].

Both sources further commended Cooper's research, strategically utilised in the design of the highly successful Fore-sighting Manual (2016). The Manual has been used extensively by city and county councils and local authorities: "*being an expert in communication and event design (she) was also being called upon to help us design workshops and materials for workshops and communicating on complex 'city futures' issues and between academics and policy makers and government*" [S1]. Engaging research users with the work in this way has impacted upon 19 different cities across the UK, e.g., Milton Keynes, Rochdale, Newcastle, Manchester, Reading and Belfast, who used it to develop their own Foresight projects and, in some cases, went on to develop their own 50 year future visions. Milton Keynes is a notable, highly successful example of this process, with its City Council unanimously accepting the recommendations of the *MK Futures 2050 Commission* in 2017 [S3]. Newcastle also developed its own *City Futures Development Group*, comprising local authorities, universities, the Local Enterprise Partnership and the private sector, to develop a long-term plan for the city's development and research needs, with support provided by Foresight's *Future of Cities* project [S4]. The manual was influenced by the creation of a *City Visions Network* (2013) across the UK and developed and used in workshops led by Cooper and Dunn. The approach developed from a local to a regional initiative, and then grew into a national network, feeding into Foresight work in helping people to develop future visions, with a particular emphasis on second and third tier urban centres. For example, Dunn's leadership of the *Future of Rochdale* project was a precursor to the levelling up agenda and subsequent initiative *Stronger Towns Fund*, through which Rochdale received GBP173,029.

Building on the *City Visions Network*, another continuing benefit of enabling cities to think about and envision long-term futures was the creation of the Urban Insights Group, a collaboration between Lancaster City Council and Cooper and Dunn in 2016. The Lead Planner at Lancaster City Council said that adopting this approach, "*had given the council team confidence in our work and our long term vision and to think beyond the immediate issues and politics*" [S8].

## 2) Redesigning and redeveloping official regulatory documents and systems, in response to the Grenfell Inquiry

In the wake of the Grenfell tragedy, the UK Government's *Independent Review of Building Regulations and Fire Safety* (2018, led by Dame Judith Hackitt) labelled the regulatory system covering high-rise and complex buildings as 'not fit for purpose' and having 'deep flaws'. This included the suite of Building Regulation Approved Documents used by many thousands of builders, building inspectors, construction companies and architects across the UK. As a result, the Buildings and Regulations Advisory Committee (BRAC) commissioned an expert group and tasked them with making recommendations to improve these Documents. Drawing on the research and her team's expertise on the design, construction and planning of cities, and the visualisation of complex issues in cities [R1], between January and June 2019, Cooper made a major contribution to the group's report, as one of only two members with no background in the construction industry. As the Secretary to BRAC stated: *"her background in design would also allow her to look at the overall suite of documents, and help design the most effective approach to answer the challenges raised by Grenfell, and to ask the difficult questions, i.e. why do you do it this way and what does it mean to be user friendly?... It was a hugely successful group who wrote a hugely successful report that Dame Judith Hackitt was delighted with. She was very, very positive about the report"* [S5]. Due to delays caused by the 2019 general election and coronavirus pandemic, the report has yet to be published.

The Secretary stated that recommendations in the report - to reorganise, streamline and digitise the Approved Documents - will *"make people's lives easier... it will have significant long-term benefits for the construction sector, making it easier for builders, construction firms, architects and building inspectors to meet and adjudge the new standards, but also by extension the general public, as it will ensure safer buildings for us to live and work in"*. Speaking to broader significance, the Secretary also offered: *"At a policy decision-making level, the report and Rachel's insights on digital design and accessibility have given the Ministry for Housing and Local Governments food for thought about what is specifically achievable from a regulatory reform and communication perspective, and what we really need to prioritise in the rolling out of such major changes. It has triggered a lot of reconsideration in how we can do things in the future and bring them more into the digital age, but also then keep them in the digital age and not slip back into old habits. Digital design can help make regulations and policy more accessible and this has been a critical learning from our work with Rachel"* [S5].

## 3) Shaping local government thinking around strategic city planning and wellbeing

Dunn, Cooper, Pollastri and Cureton drew on their insights into wellbeing and place making [R1-6] when building capacity amongst Lancaster City Council city planning team, between 2013 and 2017. Through workshops designed to involve participants in the research process, the city planners and the research team co-created and developed understanding and knowledge of the complexity of city design, place making, transport systems and wellbeing. The Lead Planner at Lancaster City Council said of the interaction: *"The workshops explored issues relating to transport, infrastructure and sustainability, but also explored ideas around health, wellbeing and liveable places. These engagements have continued over the past years since our first meeting, and they have provided substantial benefits to both the City and [Lancashire] County Councils and helped influence the direction of both authority's programmes in these areas"* [S8]. More recently another series of workshops, led by Dunn and Cooper, has further influenced the development and testing of a collaborative initiative between Lancaster City Council and Lancashire County Council (the higher tiered local government body). The Councils' plan to realise a vision for Lancaster city centre's future development is laid out in *Lancaster City Centre Movement and Public Realm Strategy* and is described by the Lead Planner as a 'once in a generation opportunity'. He stated the research-informed workshops had *"helped inform the work that the City Council is currently undertaking regarding planning for post-Covid recovery, as we seek to reinvent the function and purpose of our established town centre"* [S8].

Moreover, Cooper's relationship with Lancaster City Council has helped to shape its strategy and overall outlook, and relationship with Lancashire County Council: *"Rachel's research insights in health, wellbeing and place making has helped inform, but also gives us confidence to be able to take forward our own thoughts as well because we share the ambition for the city with"*



*Rachel and her team and we want to see it fulfil its full potential... not just in terms of a physical concept, but what it means in terms of the wellbeing of the population, it's helped us move the debate forward and shape it with [Lancashire] County Council as well" [S6].*

#### **4) Steering the strategic direction of organisations, in terms of future planning, mobilities and health and wellbeing; from the Connected Places Catapult to SMEs**

Cooper was a non-executive director of the Future Cities Catapult (FCC), now the Connected Places Catapult (a merger of FCC and the Transport Systems Catapult in 2019) between 2013 and 2020. Catapults are not-for-profit organisations backed by Innovate UK to translate research and knowledge into commercial opportunities for the benefit of UK industry. The *Liveable Cities* project and all the 14 corresponding *little Books* (edited and produced at Lancaster) relating the findings were distributed and communicated at a workshop with the Catapult team in 2016. The Chief Executive of the Connected Places Catapult said *"of particular importance have been the little Books of Liveable Cities ... incredibly valuable, offering digestible insights into the latest thinking on urban and digital design and have influenced how we approach the future of places."* Furthermore, Cooper's research insights from *Liveable Cities* project have meant that *"she has played a critical role in the governance of [Catapult's] success"*. The Chief Executive added, *"In 2017, we had a big policy debate, as part of the review process that Rachel was overseeing. It centred on the important question: are we here to make cities better, or are we here to grow UK PLC? ... Not everyone on the board got this nuance. Rachel's contribution ... ensured this was correctly communicated, and her role in developing strategies around these related issues has had a major impact on the policies and steer of the organisation. She sat on every strategy sub-committee, to rewrite the strategy. Her contribution and insight there was invaluable"* [S6].

The Chief Executive and the Policy Lead at Connected Places Catapult also alluded to Cooper's research insights having influenced the Catapult's direction and focus on the future of planning, mobilities and health and wellbeing [S6, S7]. The former said, *"expertise in digital design, was also critical in terms of our approach to land use, planning and city design. As a direct consequence of her intervention, the organisation now increasingly looks at this in terms of digital planning and design of the built environment. Two principles that come directly out of Rachel's research insights. These approaches have been further entrenched through her role in informing various iterations of our strategy (<https://cp.catapult.org.uk/about-us/our-mission-and-role/>)"*. Consequently, FCC has made an impact on the digital land and planning landscape by supporting research and innovation to change regulations and by digitising the system with the support of over 200 SMEs working in this area. It has also impacted upon the development of internal skills and the capacity of the Catapult with regard to local government strategy and planning. The Policy Lead said, *"There are many companies now developing products and services in this space, there's about 100 local authorities are benefiting from the work... The ministry of housing now have 30 people on it working around changing urban design and planning the regulations in line with the principles of FCC and by extension, Rachel"* [S7].

As a member of the FCC board, Cooper's contribution to strategy and governance saw the FCC successfully merge with the Transport Catapult to form the Connected Places Catapult in 2019, with a place centred vision and strategy that meant it was funded by the Department for Business, Energy and Industrial Strategy (BEIS) to 100% of the original funding for both of the original two catapults. This level of funding allows the successful work of both catapults to continue for the next 4 years.

#### **5. Sources to corroborate the impact**

- [S1] Testimonial from Lead Programme Manager, GO-Science Foresight (2021)
- [S2] Testimonial from the Chair of the GO-Science Foresight project, *Future of Cities* (2019)
- [S3] MK Futures 2050 Commission <https://www.mkfutures2050.com/read-our-report>
- [S4] Foresight Programme: with reference to Newcastle's City Futures Development Group
- [S5] Testimonial from the Secretary to the Building Advisory and Regulations Committee, in response to the 2018 Independent Review of Building Regulations and Fire Safety (2021)
- [S6] Chief Executive, Connected Places Catapult (previously Future Cities Catapult) (2021)
- [S7] Policy Lead, Connected Places Catapult (previously Future Cities Catapult) (2019)
- [S8] Testimonial from the Lead Planner, Lancaster City Council (2021)