

Dean's Roundup: 15 December 2017

Roundup: *Ceiling function*, the mathematical operation of rounding a number up to the next higher integer.

Roundup: a term in American English referring to the process of gathering animals into an area, known as a "Muster" in Australia.

Rounding up: when a helmsman cannot control a boat and it heads into the wind

Roundup: the plan for an invasion of northern France by Allied forces during World War II (Wikipedia)

Dean's Roundup: part blog, part bulletin; part honour roll, part curatorial [cu'ra-to'ri-al] (kyŏr'ə-tŏr'ē-əl, -tŏr'-) n. nounised by the Dean from curator + editorial

Dear all,

We are almost at the end of a very busy review period for studio teachers and their students and a very busy year for all of us. Many people are disappearing overseas from next weekend. Let me take this opportunity to thank everyone for so many different kinds of contribution to FoA's march of progress during 2017. It's not been an easy year for those grappling with curriculum change. Hopefully there have been some rewards and we are all wiser than before. We have lots of challenges facing us in 2018 but in my view, they are all good. This is a great faculty and getting better all the time. Progress is not achieved easily. It has to be fought for and there are always risks. What matters is what you do with the down-side. A successful academic is either up or getting up. HKU will transition to a new president in 2018. I am meeting him on Friday and will report back. The current Provost is likely to be acting President for 6-9 months and we can be assured of his strong support for FoA. He is impressed with the change in research culture in the faculty as signaled by the mock RAE results this year and recent trends in GRF and other competitive grant performance. Being a surgeon, he understands the practice focus of FoA teaching and scholarship and is fully supportive of our current strategy of appointing people to career tracks that suit their interests and strengths. He is not so supportive of tenure track practice/design-focused applications without published work, because he is both a prize-winning practicing surgeon and a highly cited academic publisher. He has made it quite clear that writing up even a very complex, novel and creatively designed surgery case study, would not be considered research in the academic medical field. Research (quantitative and qualitative) is what you do before you open someone up. It is not just the provost's view. I cite it because of the challenge it poses to many colleagues in FoA. I will turn my attention in the new year, back to the design-research position paper that has been drafted but not completed during 2017. I had hoped that we would have a consultation version ready by the end of last summer but it was not to be. The division of labour according to specialism, interest and competence is not just an HKU fad. This is a long-term secular trend in good universities globally. We need a strong practice professoriate and teaching professoriate to continue our rise and to make the most of the very considerable opportunities before us. Architecture, landscape and urban design schools are special in this way. We cannot afford to let the university's drive to research excellence jeopardise FoA's reputation for delivering a global class design education. And our academic research would be the poorer without a strong emphasis on design and policy interventions. I intend to see these

tracks established for the sake of our students, our supporters in the professions, and for the health of those professions and society more widely.

I am truly excited about the year ahead and the achievements waiting to be made. We end the year with two high profile symposia: *Rethinking Pei*, and *Urban Futures: Hong Kong and Chicago Symposium*. I wish both the success that they deserve. This is an appropriate note on which to depart for the winter break: drawing in a high profile crowd to reflect intellectually on significant architectural and urban issues from the past and future.

Have a great Christmas and New Year's holiday break and see you, refreshed, in January.

Congratulations to all those who have contributed in the ways described below.

Chris

Teaching and other Achievements

Media

Healthy High Density Cities (HHDC) Lab's research was widely reported in international news media:

- **Fast Company**, a US business magazine: 7 Nov 2017. Living in a dense city makes citizens healthier. <http://www.arch.hku.hk/living-in-a-dense-city-makes-citizens-healthier/>
- **The Guardian**: 6 Oct. 2017. Inner-city living makes for healthier, happier people, study finds. <https://www.theguardian.com/society/2017/oct/06/inner-city-living-makes-for-healthier-happier-people-study-finds>
- **Daily Mail**: 6 Oct. 2017. Cities make healthier, happier people. <http://www.dailymail.co.uk/wires/reuters/article-4953838/Cities-make-healthier-happier-people--report.html>
- **International Business Times**: 6th Oct. 2017. We're better off living in cities – and here are three reasons why <http://www.ibtimes.co.uk/were-better-off-living-cities-here-are-three-reasons-why-1642132>
- **Thompson Reuters**: 5th October 2017. Cities make for healthier, happier people – report. <https://news.trust.org/item/20171005223645-zgrp8/>

HHDC's research work will also appear in the Upcoming Issue of **HKU Bulletin**.

FoA Departments and Divisions

Department of Architecture (DARCH)

1. Mr. Yan Gao

- Yan's student, Tang Cheuk Yan Apple, has won one of the Students Excellence A&D Trophy Awards 2017 for her BAAS 4-year project Ting-Vertical Courtyard.
- won the Excellence in Professional Architecture _ Institutional / Public Space Category, A&D Trophy Award 2017 for our recent completed project, Tianyi Lake Children Dream Town. Nelson Chen, the director of School of Architecture CUHK is one of the three winners in this category too.

Department of Urban Planning and Design (DUPAD)

1. Professor Rebecca Chiu

- is elected as Honourary Member of the Hong Kong Institute of Planners in recognition of her contribution to planning and the Institute. The certificate was presented at the Institute's annual dinner on 23 Nov 2017.

2. Ms. Christina Lo

- Conducted a Rural NT North Community Planning Workshop:

Year 2 MUP Students organized a Community Planning Workshop on Saturday, 25 Nov 2017. It took place at the Fung Kai Primary School in Sheung Shui, New Territories. The Workshop is part of the Community Planning Studio course where students apply planning knowledge and skills to develop planning proposals for an assigned area by working closely with the local community. This year's study area is the Rural New Territories North with focus on three indigenous villages of Sheung Shui Wai, Tsung Pak Long and Ho Sheung Heung as well as the site of the Hong Kong Golf Club in Fanling. Draft Conceptual Community Plan options were presented at the Workshop which address some contentious issues including the Small House Policy, village regeneration, rural heritage, agricultural land rehabilitation and the future use of the extensive Fanling Golf Course. Input received from the Workshop is being considered for the finalization of the Community Plans. For details, please see (<https://www.facebook.com/NTNcommunityplanning/>)



3. Professor Bo-sin Tang

- Professor Tang's student, Mr. Kenneth Wong (MUP Year 1), presented his award-winning project "The Dirty of Loudness" at the ESRI China (HK) User Conference at the Hong Kong Convention and Exhibition Centre on 24 November 2017. Kenneth is the Winner of the ESRI Young Scholars' Award 2017.

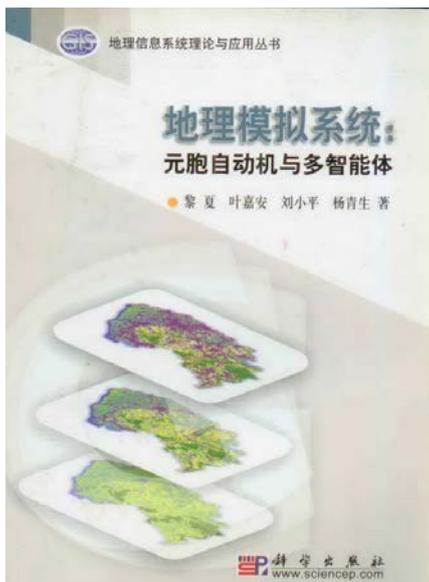


- Professor Tang's students, Mr. Cyril Chan, Mr. Sunny Hau, Ms. Janice Ho, Ms. Michelle Kwan and Mr. Canon Wong (all MUP Year 2), gave a public presentation of their work in the Community Planning Studio at the Technical Session of ESRI China (HK) User Conference at the Hong Kong Convention and Exhibition Centre on 24 November 2017. The title of their presentation was "Application of GIS in Town Planning: A Case Study in Planning for Rural-Urban Integration".



4. Professor Anthony Yeh

- The book “Geographic Simulation: Cellular Automata and Multi Agent System (地理模拟系统:元胞自动机与多智能体)” written by Xia Li, A.G.O. Yeh, Xiaopeng Deng and Qingsheng Yang published by Beijing, Science Press, 312 pp. in 2007 (in Chinese), has received the 2nd National Distinguished Geographic Book Award by the Geographical Society of China.



Division of Architectural Conservation Programmes (DACP)

1. Dr. Hoyin Lee

- served as the Chairman and Conservation Advisor from November 2016 to June 2017 for the St. James Settlement Working Group for the Submission of “Blue House Cluster” for the 2017 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation. Results of the 2017 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation was announced on 1 November 2017, and “Blue House Cluster” won the top award – Award of Excellence – the first ever for conservation projects in Hong Kong. See:

<http://bangkok.unesco.org/sites/default/files/assets/article/Culture/files/project-profiles-2017-unesco-heritage-award-winners.PDF>

and

<http://www.scmp.com/news/hong-kong/community/article/2117982/hong-kongs-historic-blue-house-wins-unescos-highest>.



A selection of media interviews:

- <http://news.takungpao.com.hk/paper/q/2017/1102/3509713.html>
 - <https://www.hk01.com/%E7%A4%BE%E5%8D%80/130353/-%E8%97%8D%E5%B1%8B%E7%8D%B2%E7%8D%8E-%E9%A6%99%E6%B8%AF%E9%A6%96%E5%A5%AA%E8%81%AF%E5%90%88%E5%9C%8B%E4%BF%9D%E8%82%B2%E5%A4%A7%E7%8D%8E-%E8%8D%89%E6%A0%B9%E4%B8%BB%E5%B0%8E%E5%80%A1%E7%A4%BE%E6%9C%83%E5%83%B9%E5%80%BC%E6%88%90%E5%85%88%E4%BE%8B>
 - <https://www.hk01.com/01%E8%A7%80%E9%BB%9E/130763/-01%E8%A7%80%E9%BB%9E-%E8%97%8D%E5%B1%8B%E7%BE%A4%E7%8D%B2%E7%8D%8E-%E4%BF%9D%E8%82%B2%E7%84%A1%E5%BD%A2%E7%9A%84%E7%A4%BE%E5%8D%80%E5%83%B9%E5%80%BC>
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Heritage Conservation. Results of the 2017 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation was announced on 1 November 2017, and “Blue House Cluster” won the top award – Award of Excellence – the first ever for conservation projects in Hong Kong.

As commended by the chair of the award jury, “The Jury was impressed by the heroic nature... of protecting heritage that is rooted in the least powerful segment of society.” According to the jury citation, “The revitalization of the Blue House cluster provides triumphant validation for a truly inclusive approach to urban conservation. A broad alliance spanning from tenants to social workers and preservationists waged a grassroots advocacy campaign to save the last remaining working-class community in the fast-gentrifying enclave of Wan Chai, which was threatened by demolition and wholesale redevelopment.” As the jury citation concludes, “This unprecedented civic effort to protect marginalized local heritage in one of the world’s most high-pressure real estate markets is an inspiration for other embattled urban districts in the region and beyond.”

See:

<http://bangkok.unesco.org/sites/default/files/assets/article/Culture/files/project-profiles-2017-unesco-heritage-award-winners.PDF>

and

<http://www.scmp.com/news/hong-kong/community/article/2117982/hong-kongs-historic-blue-house-wins-unescos-highest>.

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- <https://www.hk01.com/%E7%A4%BE%E5%8D%80/130353/-%E8%97%8D%E5%B1%8B%E7%8D%B2%E7%8D%8E-%E9%A6%99%E6%B8%AF%E9%A6%96%E5%A5%AA%E8%81%AF%E5%90%88%E5%9C%8B%E4%BF%9D%E8%82%B2%E5%A4%A7%E7%8D%8E-%E8%8D%89%E6%A0%B9%E4%B8%BB%E5%B0%8E%E5%80%A1%E7%A4%BE%E6%9C%83%E5%83%B9%E5%80%BC%E6%88%90%E5%85%88%E4%BE%8B>
- <https://www.hk01.com/01%E8%A7%80%E9%BB%9E/130763/-01%E8%A7%80%E9%BB%9E-%E8%97%8D%E5%B1%8B%E7%BE%A4%E7%8D%B2%E7%8D%8E-%E4%BF%9D%E8%82%B2%E7%84%A1%E5%BD%A2%E7%9A%84%E7%A4%BE%E5%8D%80%E5%83%B9%E5%80%BC>

Division of Landscape Architecture (DLA)

1. Mathew Pryor

- has been appointed a Senior Fellow of the UK's Higher Education Academy <www.heacademy.ac.uk> in recognition of his 'leadership in teaching' in the University.

CETL are actively promoting fellowship for all teachers within HKU as a means of obtaining external peer-recognition of teaching excellence. This is likely to become one of the University's performance indicators for Teaching Excellence in the coming years. Through CETL, Mathew has volunteered to advise / mentor any faculty colleagues who wish to seek HEA fellowship.

- was one of the key speakers at the 'Flipped Classroom Learning Symposium' held on 6 December 2017, and shared his experiences of offering a common core course using a flipped classroom format, i.e. having students access course content on-line and then using weekly mass workshop sessions to allow them to explore / discuss / apply the material through high-intensity in-class group activities (instead of a standard lecture and tutorial format).

The symposium was organised by Technology-Enriched Learning Initiative (TELI) and attended by more than 160 colleagues from across the University. A full recording of the event will be made available on the TELI website.

Research Achievements

HKUrbanLab research groups

CUSUP

1. Dr. Shenjing He

- was invited to give a plenary speech entitled "Gentrification and the remaking of Chinese cities" at the Urban Governance Reform and Innovation Forum, 2017 Annual Conference of the Urban Planning Society of China, 18-20 November, 2017, Dongguan, China.
- was invited to give a speech entitled "Gentrification and the remaking of Chinese Cities" in the Round-table Public Forum of "Urban Redevelopment: Practice, Reform and Innovation", co-organized by Guangzhou Academy of Social Sciences and South China University of Technology, Guangzhou, China, 24 November, 2017. The public forum was attended by more than 100 participants, and reported by a number of major media such as Guangzhou TV, Nanfang Daily, Guangzhou Daily, Yangcheng Evening News, China News Service, Tencent News, Chinese Social Sciences Today.
- was invited to give a presentation entitled "Housing differentiation and housing poverty in Chinese low-income urban neighborhoods under the confluence of State-market forces" in the International Workshop on "Social-spatial

Differentiation, Neighborhood Effects, and Residential Segregation in Cities: Towards a Comparative Analysis” in Shanghai University, 8-9, December, 2017.

2. Dr. Weifeng Li

- Dr. Weifeng Li delivered an invited presentation, titled “Individual Resilience to Urban Flooding: A People-Disaster-Society-Place framework” at the International Conference on Climate Change, Natural Hazard & Sustainable Cities, organized by the Pusan National University (Graduate School of Climate Change) in Busan, Korea on 24 November 2017.

3. Dr. Kyung-min Nam

- presented a research paper titled “Health Damage from Excess PM2.5 and O3 Pollution in China: A Province Level Analysis” at the 2017 North American Meetings of the Regional Science International (November 7-11, 2017/Vancouver, BC, Canada).
- has been published a coauthored paper:

Zhang, X., X. Ou, X. Yang, T. Qi, **K.-M. Nam**, D. Zhang, and X. Zhang. 2017. Socioeconomic Burden of Air Pollution in China: Province-level Analysis Based on Energy Economic Model. *Energy Economics* 68: 478-489.

Abstract: *In this study, we apply to China the China Regional Energy Model, developed as part of the Regional Emissions Air-Quality Climate Health (REACH) assessment framework, and estimate PM2.5-associated health costs. We estimate that, in 2015, exposure to PM2.5 caused a nationwide welfare loss of US\$248 billion (3.6% of the baseline welfare level). Over half the cost is from mortalities associated with chronic exposure, followed by broader economic loss (38%) and direct loss from short-term exposure (9%). The cost varies among provinces (0.5%–5.8% of the baseline welfare level), due to subnational heterogeneity in air quality, population density, and income levels. The cost in absolute terms is large in populous, coastal provinces, such as Shandong, Jiangsu, Zhejiang, and Guangdong, but when the local economy size is controlled for, the Greater Beijing area and central inland provinces also suffer large welfare losses in relative terms.*

4. Professor Bo-sin Tang

- Prof. Bo-sin Tang was appointed as the Chairman of the Accreditation Panel of the RICS Asia Education Standard Board to participate in the accreditation of a proposed Master degree offered by Hwa Hsia University of Technology, Taiwan in collaboration with Hong Kong Shue Yan University on 27 November 2017.
- represented FoA/HKU to attend the Sydney meetings of the Foresight Future of Cities International Network involving urban scholars from Newcastle University (UK), the University of New South Wales (Australia), and Groningen University (the Netherlands) from 12 December to 13 December. He attended seminars, roundtable discussions and workshops about strategic planning issues with representatives from the Sydney's Department of Planning and Environment, Committee for Sydney and the Greater Sydney Commission.



5. Professor Anthony Yeh

- Published the following paper:

Adeel, Muhammad, Anthony G. O. Yeh and Feng Zhang (2017), "Gender Inequality in Mobility and Mode Choice in Pakistan", *Transportation*, Vol. 44, pp. 1519-1534

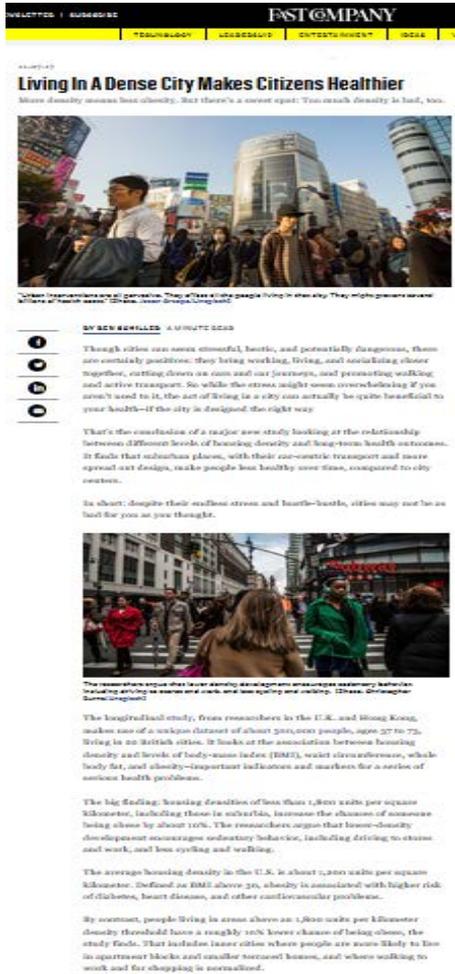
DOI 10.1007/s11116-016-9712-8

Abstract: *Using the nationally representative dataset of the 2007 Pakistan Time-Use Survey, this paper examines gender differences in daily trip rate, mode choice, travel duration, and purpose of travel, which are previously unreported because of limited data availability. Wide gender mobility gaps are observed in the country, where women are less likely to travel, are half as mobile as men and may rely heavily on walking. The particular social and cultural context of the country, that renders women as private, secluded and family honor, seems influential in shaping their mobility and choice of activities. Demographic factors such as age, household income, and marital status significantly decrease female mobility levels. Hence, these findings call for a gender-based culturally responsive transportation policy in the country.*

1. Dr. Chinmoy Sarkar

- was interviewed by Fast Company, a US business magazine about the big data UK Biobank Urban Morphometrics Platform based research.

<https://www.fastcompany.com/40492045/living-in-a-dense-city-makes-citizens-healthier>



Living In A Dense City Makes Citizens Healthier
More density means less obesity. But there's a caveat: You can't be too dense. In fact, you can't be too dense. In fact, you can't be too dense.

BY BEN SCHILLER | 4 MINUTE READ

Though cities can seem stressful, hectic, and potentially dangerous, there are certainly positives: they bring working, living, and socializing closer together, cutting down on car and car journeys, and promoting walking and active transport. So while the stress might seem overwhelming if you aren't used to it, the act of living in a city can actually be quite beneficial to your health—if the city is designed the right way.

That's the conclusion of a major new study looking at the relationship between different levels of housing density and long-term health outcomes. In fact, that relationship is positive, with their car-centric transport and more sprawl car designs, make people less healthy over time, compared to city centers.

In short: despite their bad press and health-related, cities may not be as bad for you as you thought.

The researchers argue that lower density encourages sedentary behavior, leading to less walking and less social interaction. These, in turn, are linked to obesity, heart disease, and other cardiovascular problems.

The longitudinal study, from researchers in the U.K. and Hong Kong, makes use of a unique dataset of about 300,000 people, ages 27 to 73, living in 20 British cities. It looks at the associations between housing density and levels of body-mass index (BMI), waist circumference, which body fat, and obesity—important indicators and markers for a range of serious health problems.

The big finding: housing densities of less than 1,000 units per square kilometer, including those in suburbs, increase the chances of someone being obese by about 10%. The researchers argue that lower-density developments encourage sedentary behavior, including driving to stores and work, and less cycling and walking.

The average housing density in the U.S. is about 1,000 units per square kilometer. Defined as BMI above 30, obesity is associated with higher risk of diabetes, heart disease, and other cardiovascular problems.

By contrast, people living in areas above an 1,000 units per kilometer density threshold have a roughly 10% lower chance of being obese, the study finds. That includes inner cities where people are more likely to live in apartment blocks and smaller, more compact houses, and where walking to work and for shopping is normalized.



Higher density leads to more walking on average, more social interaction, and better access to services, like health care. But when cities become too crowded the positive health benefits tail away. [Photo: Khara Woods/Unsplash]

In an interview co-author Chinmoy Sarkar says that the 10% increase or decrease in obesity risk may not sound like a lot. But, extrapolated to a whole city or country, it may be a very big deal. "Urban interventions are all pervasive. They affect all the people living in that city. They might prevent several billions of health costs," says Sarkar, an assistant professor with the Healthy High Density Cities Lab at the University of Hong Kong.

The research is part of an emerging field that aims to bring scientific rigor to the urban planning health question. Urbanists will often say that cities are better for walking cycling and that sprawl, of the type seen in many newer American cities, is bad for us. But Sarkar says we need to be able to prove such statements if investment and political commitment is going to follow the rhetoric. Moreover, all cities are different. While the U.K. data suggests a strong relationship, other cities will vary based on its exact layout and the health predisposition of inhabitants.

Using the same dataset, Sarkar also looked recently at green spaces and obesity levels. It also found an improvement in obesity in places with more green vegetation cover, though again the effect was relatively small. Sarkar cautions the results may not be generalizable. He also still has to work out whether cities are better off having a few major parks, or whether lots of green spaces through a city work better from a health point of view.

The main study shows that the relationship between health outcomes and density is not linear. You can have too much city-living for your own good. On the one hand, higher density leads to more walking on average, more social interaction, and better access to services, like healthcare. But when cities become too crowded the positive health benefits tail away. It's not as though a slum, where there are too many people, is healthier than a well-planned urban area, with space to move around.

Previous research has shown that installing new transit stations can promote walking and improve health, and that rates of obesity increase in areas where people are exposed to high numbers of fast food outlets. But Sarkar says the field of healthy urban planning is still at an early stage. His models don't yet have predictive value, such that you could, say, predict the health outcome of a new shopping mall.

"We would like to reach a stage where you have different urban design parameters in terms of density and accessibility and different scenarios of [personal] health risk. Then we could predict the health outcome," he says.

ABOUT THE AUTHOR
Ben Schiller is a New York staff writer for Fast Company. Previously, he edited a European management magazine and was a reporter in San Francisco, Prague, and Brussels. More

- presented a poster he coauthored with Dean Webster and Prof. John Gallacher at the Public Health Science 2017: A National Conference Dedicated to New Research in UK Public Health, Mary Ward House, London, 24th November 2017. Abstract below:

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Meeting Abstracts

Residential density and adiposity: findings from the UK Biobank

Chinmoy Sarkar, PhD , Chris Webster, DSc, John Gallacher, PhD
Published: November 2017
DOI: [http://dx.doi.org/10.1016/S0140-6736\(17\)33014-3](http://dx.doi.org/10.1016/S0140-6736(17)33014-3) 

Article Info

Summary Full Text

Abstract

Background

Although obesity has emerged as a global pandemic, the evidence for identifying optimal residential density in relation to obesity has been far from compelling. High residential density may be hypothesized to constitute leptogenic multifunctional environments promoting active living. We aimed to examine the association between adiposity and housing unit density.

Methods

This cross-sectional study involved 450 433 adults aged 38–73 years with full data from the UK Biobank. Residential unit density was objectively assessed within a 1 km street-network catchment of participants' residence. Other activity-influencing built environment included density of retail, public transport, and street movement density modelled from network analyses of through-movement of street links within the defined catchment. We fitted linear and non-linear (restricted cubic spline) models after adjusting for activity-influencing built environment, neighbourhood deprivation, socio-demographics, lifestyle, and co-morbidities, and we investigated effect modification by sex, age, and physical activity.

Findings

A restricted cubic spline model with three knots best fitted the data and identified two inflexion points at residential densities of 1600 and 3400 units per km². Below a density of 1600 units per km², each increment of 1000 units per km² was significantly associated with higher body-mass index (BMI) (β -0.24, 95% CI 0.19 to 0.30), higher waist circumference (WC) (0.55, 0.40 to 0.69), higher whole body fat (WBF) (0.57, 0.46 to 0.68), and increased odds of obesity (odds ratio 1.13, 95% CI 1.09 to 1.13); between 1600 and 3400 units per km², it was associated with lower BMI (-0.13, -0.18 to -0.08), lower WC (-0.19, -0.32 to -0.07), lower WBF (-0.20, -0.30 to -0.10), and lower odds of obesity (0.96, 0.94 to 0.99); and above 3400 units per km², it was leptogenic, being associated with lower BMI (-0.15, -0.19 to -0.11), lower WC (-0.50, -0.60 to -0.40), lower WBF (-0.26, -0.34 to -0.18), and lower odds of obesity (0.93, 0.91 to 0.95). Stronger leptogenic effects of housing density were observed among younger participants, female participants, and participants engaging higher physical activity.

Interpretation

High residential density is associated with lower adiposity in a large and diverse population sample. The evidence points to the value of housing and land-use planning policy related to densification as an upstream-level candidate for public health intervention against adiposity. Further longitudinal evidence is needed to establish causality.

Funding

University of Hong Kong Research Assistant Professorship grant, UK Biobank seed grant, UK Economic and Social Research Council Transformative Research grant (ES/L003201/1).

Contributors

CS, CW, and JG conceived the study. CS developed the built environment exposure metrics, did the formal analysis, and drafted the abstract. JG and CW commented on the abstract and contributed to redrafting. All the authors read and approved the final version.

Declaration of interests

We declare no competing interests.

Acknowledgments

The study was conducted using the UK Biobank resource (approved UK Biobank Research application: 11730). The authors thank the Ordnance Survey (UK national mapping agency) for providing access to its UK-wide spatial data for use in this study.

- spent 3 days at the Department of Psychiatry, University of Oxford, UK working as a Visiting Researcher (27th – 29th November 2017).

2. Dr. Guibo Sun

- Guibo's symposium proposal "Active transport and active sites for children in high density cities" was approved in the International conference of behavioral nutrition and physical activity 2018 (ISBNPA). ISBNPA is one of the leading conferences in the built environment and physical activity field. <https://www.isbnpa.org/index.php?r=annualMeeting/index>

The symposium will be chaired by Dr. Nicolas Oreskovic (Harvard Medical School). Professor Ester Cerin (Australian Catholic University) will be the Discussant. It includes three presentations:

- i. "Living in school catchment neighborhoods: Perceived built environments and active commuting behaviors of children in China" by Dr. Guibo Sun (Healthy high density cities lab, FoA, The University of Hong Kong)
 - ii. "Site preference and after-school physical activity impact of children in China" by Dr. Xili Han (School of Urban Planning and Design, Peking University)
 - iii. "Perceived neighborhood environment and independent mobility among children residing in an ultra-dense metropolis" By Dr. Wendy Huang (School of Physical Education, Hong Kong Baptist University)
- attended the 2017 Researcher Links Workshop "The impact of rapid urbanization on health in Chinese mega-cities", held between 27-29 November 2017, Xiamen, China.
 - He presented his research, collaborated with Dean Webster, on "The impact of urban rail transit development on travel and health". The workshop and participants' travel were supported by British Council Researcher Links scheme offered within the Newton Fund.

iLab

1. Dr. Wilson Lu

- Published a joint paper with Mr. Diandian Liu (Part-time PhD student from REC, full-time employee of Gammon Construction Ltd.) and Ms. Yuhan Niu (PhD student from REC):

Liu, D.D., Lu, W.S., and Niu, Y.H. (2017). Why do smart construction systems fail? Pass through the labyrinth with an extended technology acceptance model. *ASCE Journal of Construction Engineering and Management*, forthcoming.

Abstract: *Research and development (R&D) of smart construction systems has been constrained by the contentious relationship between system developers and potential industry users. System developers are critical of practitioners' reluctance to embrace new technologies, while practitioners tend to view developers' systems as disruptive. In explaining acceptance or non-acceptance of smart construction systems, the well-established technology acceptance model (TAM) is a powerful instrument. However, the model fails to capture changes in user acceptance over time. In this study, an extended TAM which*

can reflect the changes in attitude is modelled from and substantiated by a two-year longitudinal action research study conducted in parallel with the co-development of a smart system for prefabrication housing construction. It is discovered that users' attitudes towards a smart construction system are not invariable, nor are the "perceived usefulness" and "perceived ease of use". Developers should continuously enhance usefulness and user-friendliness of a system to facilitate its adoption. A particularly noteworthy finding is that external isomorphic pressures, including normative, coercive, mimetic, or a combination thereof, can affect users' attitudes towards a smart construction system, and in turn, influence the uptake of the system. Managers can thus tactically create such pressures to enhance technology acceptance within their organisations. These findings, in combination with the extended TAM, offer the foundations for development of a general theory on technology infusion in the construction industry.

- Dr. Lu did a round trip to the Yangtze River Delta (YRD) in China from 30th November to 4th December 2017:
 - i. Visited a waste recycling integrated solutions company situated in Suzhou Industrial Park on 30 Nov 2017;
 - ii. Did a talk "Finding the needles in a haystack: Identification of the illegal dumping of construction waste using big data" in Department of Civil Engineering, Xi'an Jiaotong Liverpool University, Suzhou, on 1 Dec 2017;
 - iii. Did a talk "Smart construction objects (SCOs): The building blocks for future construction" in Department of Public Policy at Zhejiang University of Economics and Finance, Hangzhou, on 4 Dec 2017;
 - iv. Visited Jingong Steel Building Group in Shanghai and discussed research on RFID-enabled BIM for prefabrication construction and smart construction objects (SCOs) on 4 Dec 2017.

2. Dean Webster

- Delivered a keynote speech entitled "iTWO City Software and Urban Planning" at iTWO World Conference 2017 in Gunagzhou Four Seasons Hotel on 14 November 2017.



- Together with Professor Peter Mathieson, Professor Anthony Yeh and Dr. Wilson Lu, received the delegation led by Professor Lieyun Ding, President of

Huazhong University of Science and Technology and Academician of Chinese Academy of Engineering. Dean Webster introduced the Faculty's visions of building information modelling (BIM), City Information Modelling (CIM), and smart cities, and explored research collaboration with the HUST. Prof. Yeh and Dr Wilson Lu introduced their research in BIM, smart construction objects, and smart cities, respectively”.



Virtual Reality Lab of Urban Environments & Human Health

1. Dr. Bin Jiang

- Has been awarded the Faculty of Architecture 2017 Research Output Prize for the following publication:

Bin Jiang, Brian Deal, HaoZhi Pan, Linda Larsen, Chung-Heng Hsieh, Chun-Yen Chang, William C. Sullivan, Remotely-sensed imagery vs. eye-level photography: Evaluating associations among measurements of tree cover density, In *Landscape and Urban Planning*, Volume 157, 2017, Pages 270-281, ISSN 0169-2046, <https://doi.org/10.1016/j.landurbplan.2016.07.010>.

<http://www.sciencedirect.com/science/article/pii/S0169204616301347>

Abstract: *The easy availability and widespread use of remotely-sensed imagery, especially Google Earth satellite imagery, makes it simple for urban forestry professionals to assess a site and measure tree cover density without visiting the site. Remotely-sensed tree cover density has become the dominant criterion for urban forestry regulations in many countries, but it is unclear how much such measures match the eye-level tree cover density that people experience; or the information gained through site visits, eye-level photography, or from consulting with citizens. To address this uncertainty, we assessed associations among two remotely-sensed and three eye-level tree cover density measures for 140 community street sites across the Midwestern United States with low, medium, or high tree cover coverage by using linear regression analysis. We found significant associations among the two remotely-sensed measures and the three eye-level measures across the three levels of tree cover. The associations between any pair of remotely-sensed and eye-level measures, however, diminish dramatically as canopy cover increased. At high levels of canopy cover, all associations between the remotely-sensed measures and the eye-level measures became statistically insignificant. These findings suggest that measures from remotely-sensed imagery fail to represent the amount of tree cover people perceive at eye-level when canopy cover is medium or high at the site scale. Therefore, the current*

urban forestry planning regulations, which rely heavily on remotely-sensed tree cover density measurements, need to be revised. We suggest strategic spots where eye-level measures of tree cover density should be emphasized.

Keywords: Urban forestry; Tree cover density; Remotely-sensed imagery; Eye-level photography; Association