

## Dean's Roundup (Friday, 10 October, 2014)

**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** (ky<sup>oo</sup>r<sup>ə</sup>-t<sup>oh</sup>'<sup>ē</sup>-əl, -t<sup>oh</sup>'-)] n. nounised by the Dean from curator + editorial]

Dear all,

First of all, congratulations to Olivier and John for winning the 'World Small Project of the Year 2014' at the World Architectural Festival. And indeed, for being shortlisted for two categories in that competition. This is the stuff our Architecture Department's reputation is built upon. We are all very proud of you both.

Next...

### **Democracy and built-form: Part 2** (see last week's Dean's Roundup for Part 1).

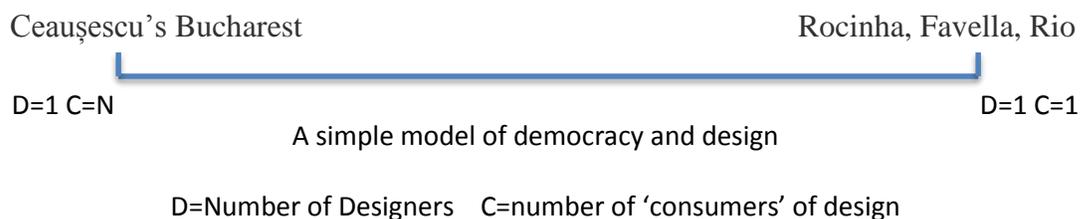
I'll keep this simple in narrative by presenting a set of propositions with minimal explanation. I present these as thought experiments. You can try testing them with logic and with empirical evidence. Perhaps we could have a symposium on the subject in the coming academic year. It would be an appropriate topic to host in HK at this time. There are other colleagues in the FoA (such as Eunice Seng, Zhu Tao and Lawrence Lai) who have studied aspects of this issue in much more depth than I have and I commend their work to you.

Propositions (in no particular order):

1. One definition of non-democratic design is design that imposes itself on others against, or in spite of their wishes and preferences.
2. This might be good design or bad design measured either by intrinsic beauty and other merit or by the utilitarian welfare it brings to those the design is imposed upon.
3. If democratic input (consultation) is considered an intrinsic part of the definition of 'good design' then imposed design is, by definition, non-democratic and bad (in that sense).

4. This leads to the odd idea that a design can be beneficial in all other respects but 'bad' because it is imposed.
5. The early 20<sup>th</sup> urban designs of Frank Lloyd Wright and le Corbusier come to mind (thanks to Eunice for the reference). Both were utopians and both had design solutions that they thought could beneficially be imposed on people they thought needed their insights. Both had good intentions. Both got it wrong in certain crucial ways. Le Corbusier's utopian solution for high-density living misjudged individual preferences for the use of space. His designs became the template for numerous dystopian social housing developments throughout Europe and beyond. FLW got it wrong because he seems not to have understood either the essential nature of the city as an ecological, social and economic phenomenon nor the market processes that create it. Broadacre was a lovely, inspiring and wholesome idea: every US citizen to receive a land grant of 1 acre (the Saudi Arabians enacted such a policy for many decades). But it failed to understand that the benefits of cities flow from people living close to each other so that they can specialize in labour and exchange with others for mutual economic and social enrichment. Le Corbusier on the more land-scarce side of the Pond, understood this idea better, but misunderstood an individual's relative preference for private and collective space.
6. Design arising from non-democratic processes is likely to be more homogeneous.
7. Design arising from autocracy is likely to be associated with less choice than design associated with democracy.
8. Design associated with autocracy is likely to be less beautiful than design associated with democracy, in the sense of having more fractal geometric beauty and scale-symmetry (see Dean's Roundup 2 weeks ago).
9. Elaborating on (8): more individual choice (in individual building design, program, land use, density, style, materials etc) leads to a more 'natural' town scape, with more organic shapes, colours, textures, spaces, sectional profiles and plan profiles, massing, street networks and so on, which are likely to have a higher degree of scale-free self-similarity than planned townscapes.
10. In terms of fractal geometry, 'high-choice' building and urban design is likely to fill space more efficiently and therefore have a higher fractal dimension.
11. Interestingly, imposed design, whether it be by a master planner, an architect or a political leader of a centrally-controlled state, tend to employ more reflective symmetry than scale-free symmetry. In this sense, imposed design tends to be a simpler kind of design, leading to more formal and predictable urban form.

12. Using a similar model to the political economy model of democracy used last week, imagine a spectrum, with 'design by one, for all' at one end and 'design by 1 for 1' at the other. (I'll come to another variant of this 'design by all for 1' later). At the left hand side of the diagram below, you have at the extreme, for example, one person designing a whole city for N people regardless of their wishes. This is the totalitarian design associated with totalitarian political regimes. Stalinist block-housing comes to mind; Nazi architecture had similarities to North Korean state architecture and other totalitarian expressions of power, control, self-obsession and extremism.
13. Other examples of 'design by 1 for all' are company towns; 'Disney World' towns; and gated communities. Note, however, that the modern capitalist versions are not likely to be as intrinsically indifferent to the wishes of users as other versions because they are designed to attract people.



14. 'Design by 1 for all' (left extreme) is likely to be bad functionally and aesthetically either because the single designer is malevolent or because of his or her limitations in cognitive capacity. Even if she is a saint, she is unlikely to be able to discover, understand and aggregate into a single perfect scheme, the wishes of the many. Even if there were no cognitive limitation (for example with a small state, city, scheme, or in the future with Big Data and real-time analysis of individual preferences etc), there is Arrow's Impossibility Theorem standing in the way of producing a design that is perfect for all (it is impossible to aggregate many individual preferences into a single unambiguously superior aggregate set of preferences).
15. However, 'design by 1 for 1', is not likely to be perfect either (extreme right hand side of the diagram). Although, in principle, all can satisfy their own individual needs, they are likely to cause problems for each other in so doing. What the economists call externalities, yield dis-benefits to all as a result of lack of coordination (planning). Ecologists call this the Tragedy of the Commons.
16. So as with last week's political economy model, neither of the two extremes in this simple model produces utopia in practice, even though the goals of both share a utopian perspective.
17. So the democratic question: how do you best organize collective action over the coordination needed to make a design work well? The question may be asked at any scale of built-form design.

18. Note that to answer this you have to define 'work well'. There is a range of alternative objectives that can be aimed for in any kind of built form design (a range of optimization problems). For example: maximise beauty, land revenue, the welfare of most of the users most of the time, the welfare of the least advantaged and so on.
19. Let's take one extreme model (picking up my earlier point): 'All design for 1'. This is an extreme (and frightening) model of democracy. Everyone has a say in everyone else's plans for their own property. It amounts to having a referendum on all individual design projects in the built environment! The extreme is absurd. But there are versions at reduced scale. In S. Korea, neighbours of a proposed retail development site each have a direct democratic say in the regulation of the project. For years, there has been debate in the UK planning system about 'third party rights' to veto and shape private development that affects those third parties. (Lawyers have consistently rejected the idea). Swiss cantons implement a version of this extreme direct-democratic approach to 'designing' urban form.
20. Short of 'All design for 1', what alternatives are there? The Korean example gives another model: 'M design for 1', where  $M < N$ , ie, a subset of the whole city, notably, those affected. However, in practice, this raises the transaction costs of development hugely and may reduce the amount available to spend on quality architecture. But it probably needs to be explored in the evolution of any country's journey to democratic built form.
21. 'R design for 1', R is a representative of M or N. This is the typical model in mature Western democracies where representative local politicians, via their professional urban professional servants, look out for the public interest in the development of land and buildings. This sounds an attractive model in principle but the result in the UK, where it has been most refined over the years is that that country has the smallest new houses in Europe, built at the highest densities, at the poorest quality and with the most uniform and un-inspiring mass designs. Hong Kong's building and planning codes famously determine the architecture and urban form of the city in a very tight manner. Controlling building design by regulation is a death knell for well-designed buildings and cities.
22. Where does that leave us? With a conundrum. Neither direct democracy nor representative democracy is a perfect alternative to despotic design of built form. Even assuming benign designers, at one extreme you have too much information; at the other you have too little information. Conundrums are a good starting point for academic innovation.
23. Over to you for reflection and discussion. I'll weave your comments into a final Part 3 next week.

Thanks to those mentioned below for their contributions and achievements. I am especially pleased to see our PhD students organizing their own symposium with an invited speaker.

Chris

## Department of Architecture

### 1. Mr. K P Cheung

- His two publications were exhibited in Chinachem Sustainable Development Conference (<https://www.welovegreenhk.com/event/greenconference2014/eng/about.php>) on 10 Oct 2014, with good response:
  - <http://icee.hku.hk/chinachem02.pdf> Greening-the-Earth project-mission &
  - <http://icee.hku.hk/chinachem01.pdf> Innovative Urban Roof Greenhouses enriched with carbon dioxide breathed out by human beings (創新的城市屋頂溫室：使用人類所產生的二氧化碳大增植物產量和綠化功率)

It can be applied to roof greenhouses for office buildings for MANY good reasons, including mitigating heat island effect, collecting fruit and vegetable waste from office users for making organic fertilizers for green plants, etc.

### 2. Mr. Olivier Ottevaere and Mr. John Lin

- The 'Pinch', Community Center and Library won 'World Small Project of the Year 2014' The project was presented to an international jury at Marina Sands, Singapore at the World Architecture Festival for two shortlisted categories: Small Project of the Year and Wood excellence prize

The relevant links about the event and results:

<https://www.worldarchitecturefestival.com/day-three-category-winners>

<http://archinect.com/news/article/110410415/a21studio-5468796-cook-robotham-and-others-win-big-at-this-year-s-world-architecture-festival>

<http://www.dezeen.com/2014/10/03/small-project-of-the-year-2014-award-pinch-community-library-rooftop-playground-john-lin-olivier-ottevaere-world-architecture-festival/>



## Department of Real Estate and Construction

### 1. Dr. Daniel Ho

- was invited to visit The University of Nottingham, Ningbo Campus on 19 September and joined an exhibition linking higher education institutions and large enterprises on 20 September 2014. Dr. Ho met with Professor Yueh-Jaw (YJ) Lin, Dean of Faculty of Science and Engineering, and conducted a presentation on our Faculty and the proposed iLab with Dr. Llewellyn Tang, Head of Department of Architecture and Built Environment, and Professor W.R. Gethin, Professor in Geospatial Engineering, Department of Civil Engineering, and others colleagues there. Dr. Ho was introduced to sets of sophisticated equipment for engineering surveying and geodesy in particular those related to Global Navigation Satellite System (GNSS). Dr. Ho also visited the Centre for Sustainable Energy Technologies (CSET) which showcased advanced facilities and designs for teaching and research. Various collaborative proposals were discussed and would be brought forward in due course.



## 2. Professor Lawrence Lai

- has the following paper just been published in electronic form of the Land Use Policy Journal:

“Where to draw the line?” That is a land use planning question for the land surveyor and the town planner\* Lawrence W C Lai, The University of Hong Kong

\*This paper is dedicated to Professor Lawrence W C Lai’s planning dissertation supervisor at the University of Sydney Professor John P. Lea, Ph.D, D.Sc.

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“Where to draw the line?” That is a land use planning question for the land surveyor and the town planner

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ABSTRACT

Inspired by the pioneering work of Bleakley and Ferris (2014) informed by Libecap and Lueck (2011), this paper develops the thesis of Lai (1996, 1997) that spatial partition of land is a basic land use planning activity, whether by governments or private bodies, which involve decisions on boundary delineation. The primordial foundation of this activity is laying out private property boundaries, which is a metonymic land utilisation exercise that defines “clearly defined property rights” in the Coase Theorem and has often been forgotten as a *bona fide* planning one. All major constitutional changes in nations commence with such a layout exercise, in which the land surveyor plays a principal role; and all land use planning innovations build upon and property development are constrained by this primordial foundation, which has huge transaction cost implications. A Colonial Hong Kong example, the Kowloon Walled City, is used to demonstrate the importance of the proper state ordering of property boundaries. The actual postwar boundary of this City has hitherto been ignored by all commentators. The emergence of modern “cross-boundary” issues resulting formally from overlapping formal land boundaries and created by industrialisation and information technology does not alter this characteristic of planning generically as drawing and redrawing of boundary lines. Some land use policy issues related to cross-boundary environmental problems and land registration are discussed.

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Preamble

We are face to face with the gravest economic problems arising out of landed property; and when we turn to economic treatises we find little to help us in their solution (Ely, 1917: p. 18).

One of the most striking features of the Scottish countryside is its geometric appearance... The origin of this field pattern can be found in the spread of ideas current in England and the Continent. The land surveyor played an important role in the making of the new landscape... for the land surveyor not only made cartographic plans but also practised *planning* in the modern sense of the word (Adams, 1968: pp. 248–249, italics author’s).

For those economists with a sustained interest in it,<sup>1</sup> the hint on how to solve the great mystery of land property by Ely (1917)

almost a century ago, as quoted above, may be the passages of Adams (1968), which were also quoted above. Private property rights on land, being *in rem* rights (Arruñada, 2012), have a spatial dimension because they involve boundary delineation, which is *bona fide* land use planning. The story of Scotland, pre-dated by what happened to Roman cities and the capital cities of Imperial China and Japan, was repeated in Canada and the United States of America’s homesteading practices (Allen, 1991). However, no one seems to have realised that the laying out of private property boundaries is an act of land use planning that continues to affect the effectiveness of government planning intervention.

Introduction

Land use planning is definitely not simply a matter of drawing lines on a piece of paper. However, it always involves drawing lines to produce, in mathematical terms, a loop (or loops) which encloses (enclose) an area (areas) on a map intended as a plan to govern land use and/or building etc. in specific locations. As cadastral boundaries of private property, which are a form of “*flat boundaries*” (Smith, 1995; Smith and Varzi, 2000), these lines are all at once means to assign rights and obligations that run with the land and constraints on development and redevelopment. As a primordial

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<sup>1</sup> Economists’ “production functions,” which stand for the relationship between inputs and outputs, have never been able to capture land as an input or output. To treat land as depletable capital input, “K,” is problematic insofar as land means three-dimensional space.

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- published the following paper at the Habitat International journal:

Private property rights not to use, earn from, or trade land in urban planning and development: a meeting between Coase and Buchanan

## Department of Urban Planning and Design

### 1. Dr. Roger Chan

- Gave a keynote presentation “Regional Planning and Cooperation” at the *Pan Pearl Delta Region Regional and Urban Planning Institutes Directors’ Forum* held in Chengdu, China on 18 September 2014.

### 2. Professor Rebecca Chiu

- Her paper “The future of home ownership and housing security in Hong Kong: implications for fast growing Chinese cities” was presented at the Urban Studies Seminar Series - Edges of Homeownership, funded by the Urban Studies Foundation, 30 September - 1 October 2014, TU Delft, The Netherlands.

### 3. Dr. Cecilia L Chu

- Has been nominated as a member of the Advisory Council for the International Association for the Study of Traditional Environments (IASTE).

### 4. NURSS

- The New Urban Researcher Seminar Series (NURSS) – a self-governing academic society organized by DUPAD’s PhD students launched their first seminar on September 29, 2014. Prof. Huang Yaping, the head of Department of Urban Planning at Huazhong University of Science and Technology (HUST) is invited as the first speaker. The seminar is titled as “*New-type Urbanization in Central China: Case of Hubei Province*”. The NURSS is supported by the Centre of Urban Studies and Urban Planning (CUSUP).



- On September 29, Prof. Huang and his 12 colleagues also formally visited DUPAD and had a meeting with DUPAD's teaching staff. NURSS was pleased to have the opportunity to help build the relationship between the two departments.

