Behavioural Economics and Housing Decisions

Lecture Four: Mega-events and Gentrification

By Helen Bao

Outline

- Research questions
- Gentrification defined
- Consequences of gentrification
- Anchoring effect
- Data and methods
- Findings and discussions
- Future research directions

Research Questions

- How did local residents perceive the impact of Olympic Games on local transport, environment, and public security?
- How did local residents' perception about the effects of Olympic Games influence their relocation decision?

- Related questions:
  - What are the causes and consequences of gentrification
  - What is the behavioural implication of expectation/anticipation/aspiration
  - What is anchoring effect?

Gentrification defined

- Marcuse, P. (2015). "Gentrification, Social Justice and Personal Ethics." *International Journal of Urban and Regional Research* 39(6): 1263-1269.
- The displacement of a lower-income population by a higher-income one through some combination of three forms of upgrading:
  - Economic upgrading––uppricing
  - Physical upgrading––redevelopment
  - Social upgrading––upscaling
- The social justice view: nobody should be displaced, everyone has the right to live in the place she/he prefers, social inequality should not be tolerated
- Both displaced residents and gentrifiers are “the victims of powerful economic forces that are operating through the market and are significantly influencing public urban-policy economic forces operating in a private market characterized by a return of capital to the city.” – the evil invisible hand!

Gentrification defined

- Ley, D. and S. Y. Teo (2014). "Gentrification in Hong Kong? Epistemology vs. Ontology." *International Journal of Urban and Regional Research* **38**(4): 1286-1303.
  - Qualitative research: content analysis of news articles published in SCMP (the largest English newspaper in Hong Kong) between 31 March 1984 and 31 December 2010, and Ming Pao (a major Chinese newspaper).
  - Keywords: Displacement, evict/evicts/evicted/eviction, demolition, redevelopment, revitalization, urban renewal, and gentrification.
  - Gentrification is scarcely mentioned (only once) in the 88/47 (SCMP/Ming Pao) newspaper accounts identified.
  - the term 'gentrification' is rarely used to organize knowledge about neighbourhood change, either in the academic literature or in public culture as revealed through media analysis and supported by local expert opinion

Gentrification defined

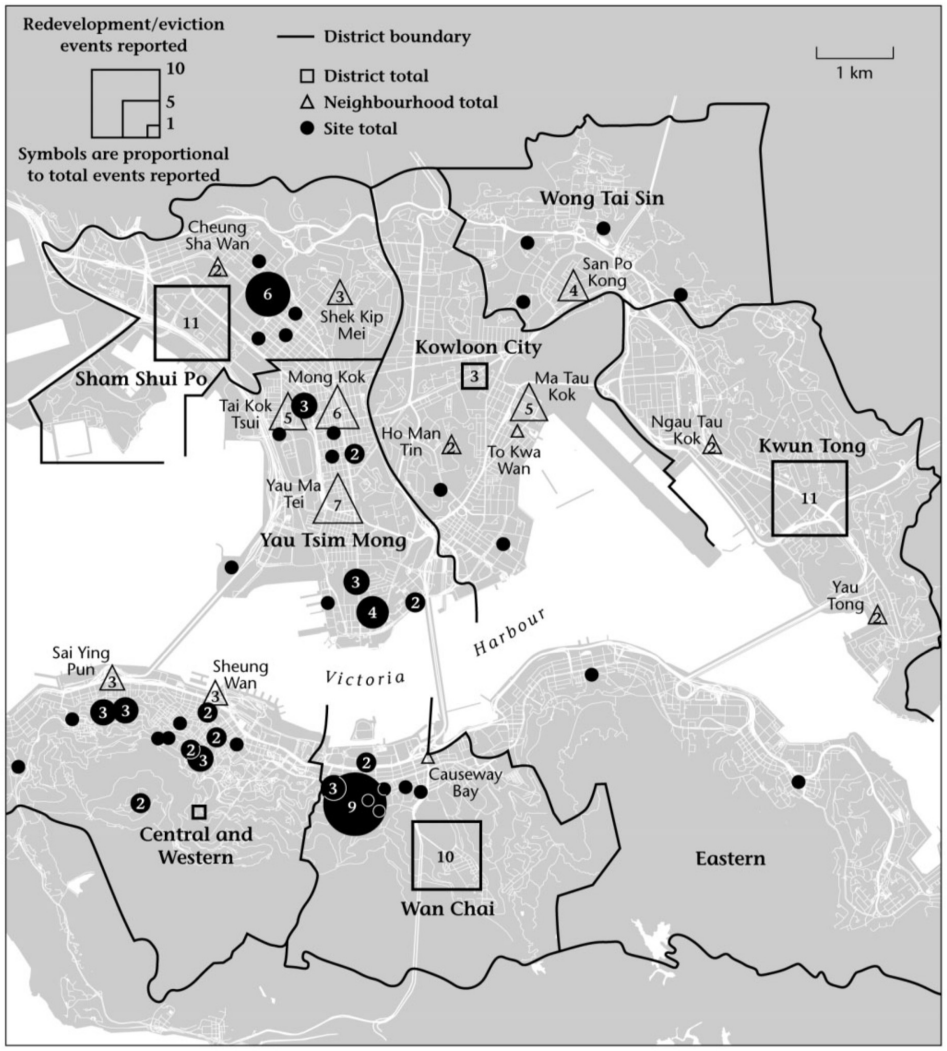


Figure 1 Sites of redevelopment with evictions in Hong Kong and Kowloon

Figure 2 Resistance to compensation for preservation on Wing Lee Street (photo by David Ley)

Source: Ley, D. and S. Y. Teo (2014). "Gentrification in Hong Kong? Epistemology vs. Ontology." International Journal of Urban and Regional Research **38**(4): 1286-1303.

Gentrification defined

Table 1 Chinese-language terms for gentrification

Chinese *Term* and Etymology	Literal Translation	Press Coverage in *Ming Pao*
中产阶级化 *zhong chan jie ji hua*	Becoming middle-class (or transforming into middle-class)	2 events, 0 on housing/ neighbourhoods
缙绅化 *jin shen hua*	Becoming gentry (or transforming into gentry)	1 event, 1 on housing/ neighbourhoods
缙绅 jin shen	In feudal times, a term for addressing those who currently or previously held government official posts	
绅士化 *shen shi hua* or 士绅化 *shi shen hua*	Becoming gentry (or transforming into gentry)	7 events, 6 on housing/ neighbourhoods
士绅 shi shen or 绅士 shen shi (both are used)	In feudal times, referring to those with power and scholarly honours or official ranks, usually the landowners and retired government officials	
高档化 *gao dang hua*	Becoming 'higher-class' (or transforming into 'higher-class')	14 events, 5 on housing/ neighbourhoods
高档 gao dang	Top grade, superior quality; when applied to consumer goods, it refers to high-grade or expensive goods with sought-after brand names	
乡绅化 *xiang shen hua*	Becoming rural gentry	0 events
乡绅 xiang shen	The gentry in the villages/countryside	
贵族化 *gui zu hua*	Becoming a noble or aristocrat	23 events, 2 on housing/ neighbourhoods
贵族 gui zu	Noble	

Source: Ley, D. and S. Y. Teo (2014). "Gentrification in Hong Kong? Epistemology vs. Ontology." International Journal of Urban and Regional Research **38**(4): 1286-1303.

The causes of gentrification

- Smith, N. (1979). "Toward a Theory of Gentrification: A Back to the City Movement by Capital, not People." *Journal of the American Planning Association* 45(4): 538-548.
- Rent Gap: the disparity between the potential ground rent level and the actual ground rent capitalized under the present land use.
- Rent gap is produced primarily by capital depreciation (which diminishes the proportion of the ground rent able to be capitalized) and also by continued urban development and expansion (which has historically raised the potential ground rent level in the inner city)
- Often an externality, i.e., unintended outcomes, from economic development, urban regeneration, and other activities that directly or indirectly increase ground rent level

The causes of gentrification

- Hamnett, C. and D. Whitelegg (2007). "Loft conversion and gentrification in London: from industrial to postindustrial land use." *Environment and Planning A* 39(1): 106-124.
  - Loft living: started from SOHO, New York in the 1950s. Artists found temporary places to work on their projects in industrial areas.
  - An example of artification- or art-led gentrification
  - Local government's consent is the key (conversation needs planning permissions)
  - Developer-led process, market oriented: back to the 'rent gap' theory by Smith (1979)

The causes of gentrification

- Hamnett, C. and D. Whitelegg (2007). "Loft conversion and gentrification in London: from industrial to postindustrial land use." *Environment and Planning A* 39(1): 106-124.

Table 1. Number of successful applications for change of use to residential, 1991–98, with average units per application and total number of units involved.

	1991	1992	1993	1994	1995	1996	1997	1998	Total
Islington									
Number	2	16	12	23	37	60	55	51	256
Average	2	5.4	4.9	12.2	12.8	10.2	7.8	8.6	9.3
Units	4	87	59	282	475	610	431	437	2385
Camden									
Number	1	2	1	2	6	10	13	3	38
Average	15	13	2	9	16.5	6.4	9.6	7	9.7
Units	15	26	2	18	99	64	125	21	370

The causes of gentrification

- Hamnett, C. and D. Whitelegg (2007). "Loft conversion and gentrification in London: from industrial to postindustrial land use." *Environment and Planning A* 39(1): 106-124.

The causes of gentrification

- Wachsmuth, D. and A. Weisler (2018). "Airbnb and the rent gap: Gentrification through the sharing economy." *Environment and Planning A* 50(6): 1147-1170.
  - Driven by both institutional players and individual homeowners
  - Airbnbfication, touristification, or buy-to-let gentrification
  - An efficient way to close the rent gap by individual investors, and a product of housing financialisation
  - Creates opportunities for asset appreciation
  - Leads to gentrification and displacement in surrounding areas

The causes of gentrification

- Wachsmuth, D. and A. Weisler (2018). "Airbnb and the rent gap: Gentrification through the sharing economy." *Environment and Planning A* 50(6): 1147-1170.

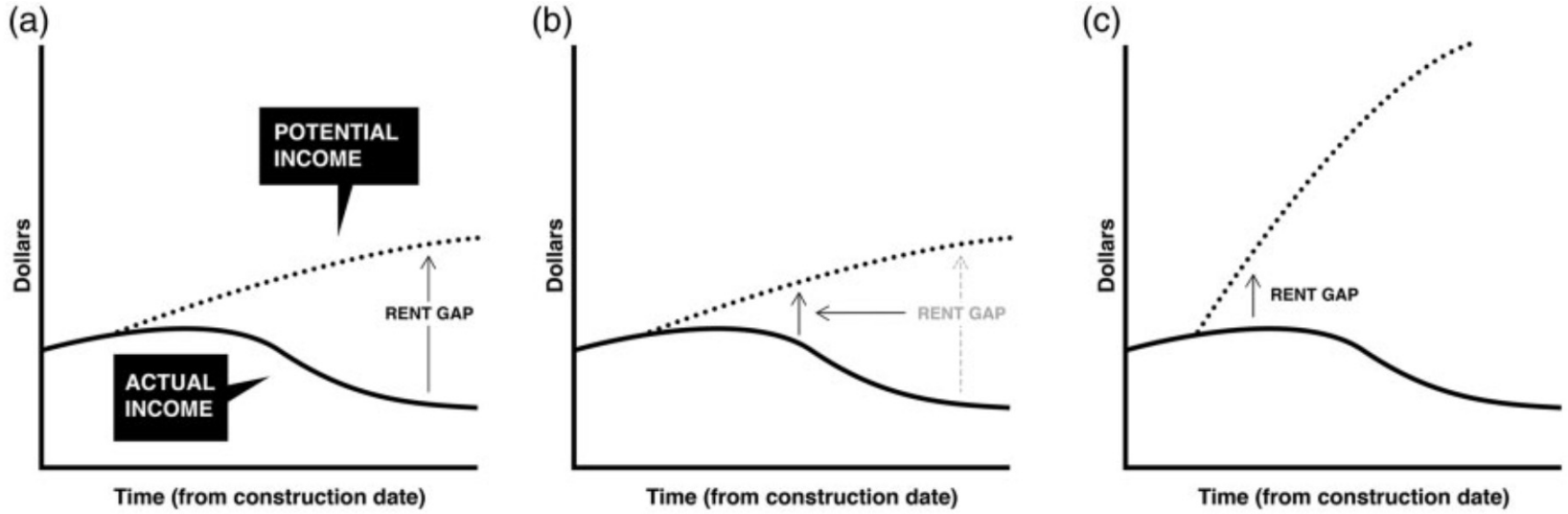


Figure 1. Variations of the rent gap: (a) In Smith's (1979) original analysis, a gap can open between gradually declining actual ground rent and the potential ground rent were the property to be redeveloped or put to the "highest and best use." When this rent gap becomes big enough, redevelopment and gentrification may follow. (b) The minimal capital needed to take advantage of an Airbnb rent gap means that the gap can become large enough to motivate landowner action much sooner than with a traditional disinvestment-driven rent gap. This causes the point at which a rent gap becomes effective to shift to the left (i.e., sooner in time) on the figure. (c) Airbnb can cause potential income to rise sharply, creating a rent gap well in advance of any declining property income.

The causes of gentrification

- Wachsmuth, D. and A. Weisler (2018). "Airbnb and the rent gap: Gentrification through the sharing economy." *Environment and Planning A* 50(6): 1147-1170.

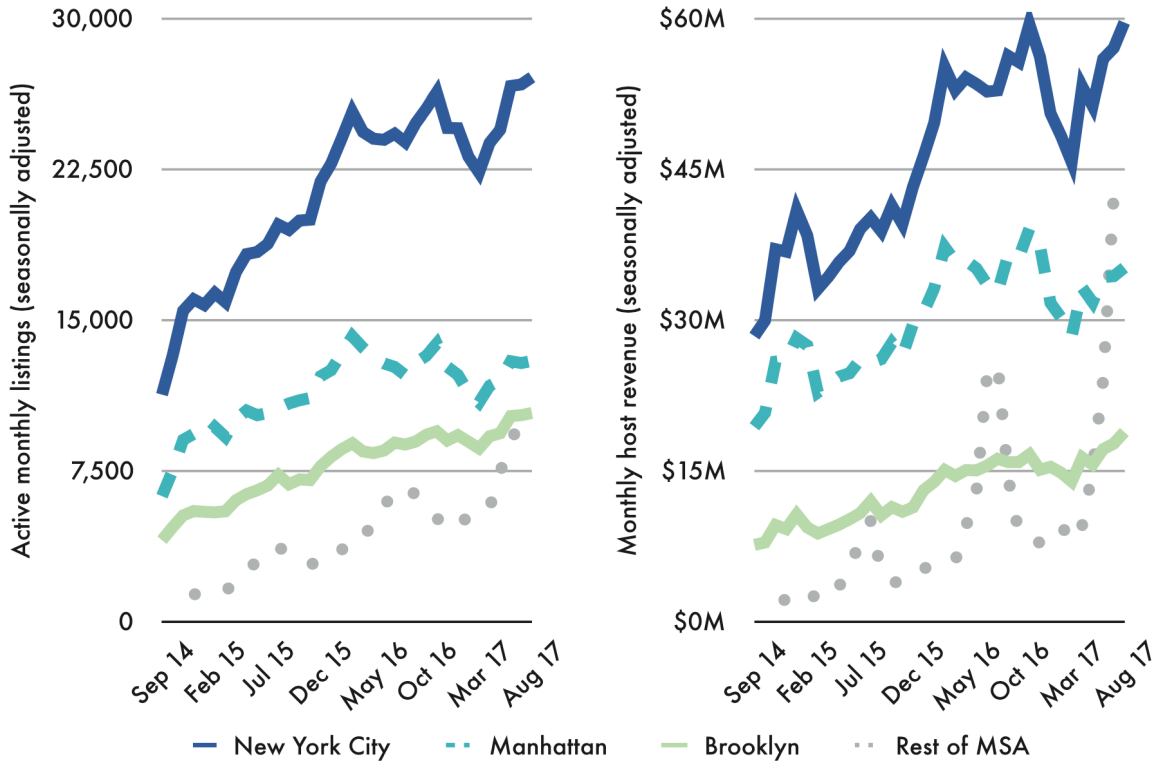
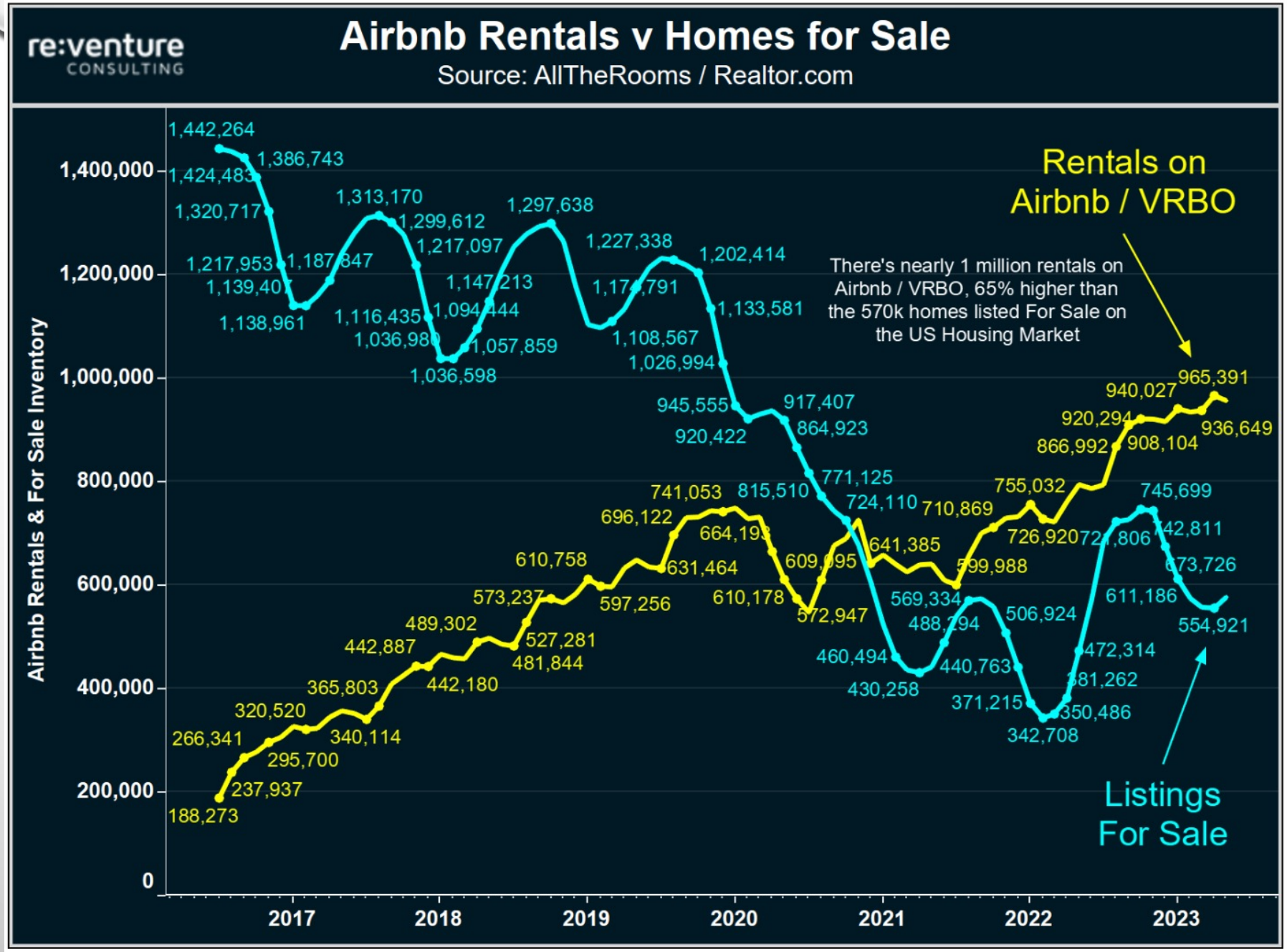


Figure 3. Seasonally adjusted revenue-earning listings (left) and monthly host revenue (right) in the New York region (September 2014 – August 2017).

Table 1. Airbnb's share of total annual residential rents in New York City, Manhattan, and Brooklyn, alongside its share of the annual growth in residential rents (2015–2017).

	Airbnb share of residential rents (2015)	Airbnb share of residential rents (2016)	Airbnb share of residential rents (2017)	Airbnb share of residential rent increase (2015–2016)	Airbnb share of residential rent increase (2016–2017)
New York City	1.2%	1.6%	1.8%	20.2%	9.2%
Manhattan	2.4%	3.1%	3.3%	46.5%	8.2%
Brooklyn	1.1%	1.5%	1.8%	13.1%	6.9%



Source: https://www.reventure.app/blog/airbnb-owners-are-being-forced-to-sell

re:venture CONSULTING

Airbnb Revenue Declines by County

% Chg in RevPAL from May 2022-23 3 Month Avg (Source: AllTheRooms)

Rank	Metro, State	County	RevPAL May 2022..	RevPAL May 2023..	% Drop
1	East Stroudsburg, PA	Monroe County	$3,529	$1,669	-52.9%
2	Lake Havasu City, AZ	Mohave County	$3,930	$2,005	-50.4%
3	Kalispell, MT	Flathead County	$2,073	$1,065	-49.2%
4	Austin, TX	Travis County	$5,002	$2,601	-48.6%
5	Sevierville, TN	Sevier County	$6,228	$3,266	-48.4%
6	Phoenix, AZ	Maricopa County	$5,661	$2,979	-48.2%
7	Myrtle Beach, SC	Horry County	$3,187	$1,672	-47.9%
8	Homosassa Springs, FL	Citrus County	$4,345	$2,304	-47.9%
9	San Antonio, TX	Bexar County	$3,538	$1,911	-47.0%
10	Gulfport, MS	Harrison County	$3,386	$1,864	-45.7%
11	Fort Collins, CO	Larimer County	$3,165	$1,780	-43.6%
12	Denver, CO	Arapahoe Coun..	$2,737	$1,554	-43.1%
13	Phoenix, AZ	Pinal County	$3,045	$1,762	-42.6%
14	Colorado Springs, CO	El Paso County	$3,064	$1,762	-42.6%
15	San Antonio, TX	Comal County	$3,383	$1,969	-42.1%
16	Jacksonville, NC	Onslow County	$3,062	$1,803	-41.3%
17	Fresno, CA	Fresno County	$2,282	$1,356	-40.7%
18	Seattle, WA	Pierce County	$2,632	$1,564	-40.6%
19	Port St. Lucie, FL	St. Lucie County	$3,182	$1,925	-40.5%
20	Medford, OR	Jackson County	$2,232	$1,323	-40.5%
21	Mobile, AL	Mobile County	$2,770	$1,673	-40.0%
22	Coeur d'Alene, ID	Kootenai County	$2,252	$1,364	-39.7%
23	Bend, OR	Deschutes Cou..	$2,494	$1,510	-39.6%
24	Denver, CO	Jefferson County	$3,578	$2,161	-39.6%
25	Bakersfield, CA	Kern County	$2,386	$1,464	-39.2%

Source: https://www.reventure.app/blog/airbnb-owners-are-being-forced-to-sell

The causes of gentrification

- **UK:** Paccoud, A. (2017). "Buy-to-let gentrification: Extending social change through tenure shifts." *Environment and Planning A* 49(4): 839-856.
- **Barcelona:** Cocola-Gant, A. and A. Lopez-Gay (2020). "Transnational gentrification, tourism and the formation of 'foreign only' enclaves in Barcelona." *Urban Studies* 57(15): 3025-3043.
- **Lisbon:** Cocola-Gant, A. and A. Gago (2021). "Airbnb, buy-to-let investment and tourism-driven displacement: A case study in Lisbon." *Environment and Planning A*. 53(7): 1671-1688.
- **Chicago:** Xu, M. H. and Y. L. Xu (2021). "What happens when Airbnb comes to the neighborhood: The impact of home-sharing on neighborhood investment." *Regional Science and Urban Economics* 88: Article Number 103670.
- **Toronto:** Sotomayor L, Tarhan D, Vieta M, et al. (2022) When students are house-poor: Urban universities, student marginality, and the hidden curriculum of student housing. *Cities* 124. Article number: 103572.
- **New York:** McElroy E and Vergerio M (forthcoming) Automating gentrification: Landlord technologies and housing justice organizing in New York City homes. *Environment and Planning D – Society & Space*.

Research Frontier

- Anguelovski I., Connolly J.J.T., Cole H., et al. (2022) **Green gentrification** in European and North American cities. *Nature Communications* 13(1).
- Arguelles L., Cole H. V. S. and Anguelovski I (2022) Rail-to-park transformations in 21st century modern cities: **Green gentrification** on track. *Environment and Planning E – Nature and Space* 5(2): 810-834.
- Melstrom R. T. and Mohammadi R. (2022) Residential Mobility, Brownfield Remediation, and **Environmental Gentrification** in Chicago. *Land Economics* 98(1): 62-77.
- Quinton J., Nesbitt L. and Sax D. (forthcoming). How well do we know **green gentrification**? A systematic review of the methods. *Progress in Human Geography*.
- Taylor Z. J. and Aalbers MB (forthcoming) **Climate Gentrification**: Risk, Rent, and Restructuring in Greater Miami. *Annals of the American Association of Geographers*.

The consequences of gentrification

- Divided views and conflicting evidence, often depends on the type of data used and the specific group of stakeholders studied (e.g., gentrifiers or the displaced)
- When macro-level data (i.e., Census data) are used, the picture is often rosier
  - McKinnish, T., et al. (2010). "Who gentrifies low-income neighborhoods?" *Journal of Urban Economics* 67(2): 180-193. "Gentrification of predominantly black neighborhoods creates neighborhoods that are attractive to middle-class black households."
- When micro-level data (e.g., case studies), more problems are identified
  - Chen, H. W., et al. (2018). "Socio-spatial polarization and the (re-)distribution of deprived groups in world cities: A case study of Hong Kong." *Urban Geography* 39(7): 969-987. "Increasing socio-economic and spatial differentiation in the 18 districts in Hong Kong is evident."

The consequences of gentrification

- Recent trends
  - New data and methods
    - **GIS + Census data (macro-level):** Lin, J. J., et al. (2021). "Temporal Changes of Transit-Induced Gentrification: A Forty-Year Experience in Tokyo, Japan." *Annals of the American Association of Geographers*.
    - **Geotagged Twitter data:** Poorthuis, A., et al. (2021). "Changing neighborhoods, shifting connections: mapping relational geographies of gentrification using social media data." *Urban Geography*.
    - **Georeferenced eviction filings (micro-level):** Sims, J. R. (2021). "Measuring the Effect of Gentrification on Displacement: Multifamily Housing and Eviction in Wisconsin's Madison Urban Region." *Housing Policy Debate*.

The consequences of gentrification

- Poorthuis, A., et al. (2021). "Changing neighborhoods, shifting connections: mapping relational geographies of gentrification using social media data." *Urban Geography*.
  - Geotagged tweets produced within the greater Lexington, KY1 (Kentucky, USA) area between June 2012 and December 2017 extracted from the DOLLY system at the University of Kentucky
  - Users with at least 10 tweets, 4.4 million tweets by roughly 25,000 users.
  - Focus on visitors, instead of residents
  - Definition of home location
    1. The census tract has to be tweeted from at least five times by the user, and
    2. The user has to have tweeted from that census tract on at least five separate days, and
    3. The earliest tweet and latest tweet from that census tract are at least ten days apart.

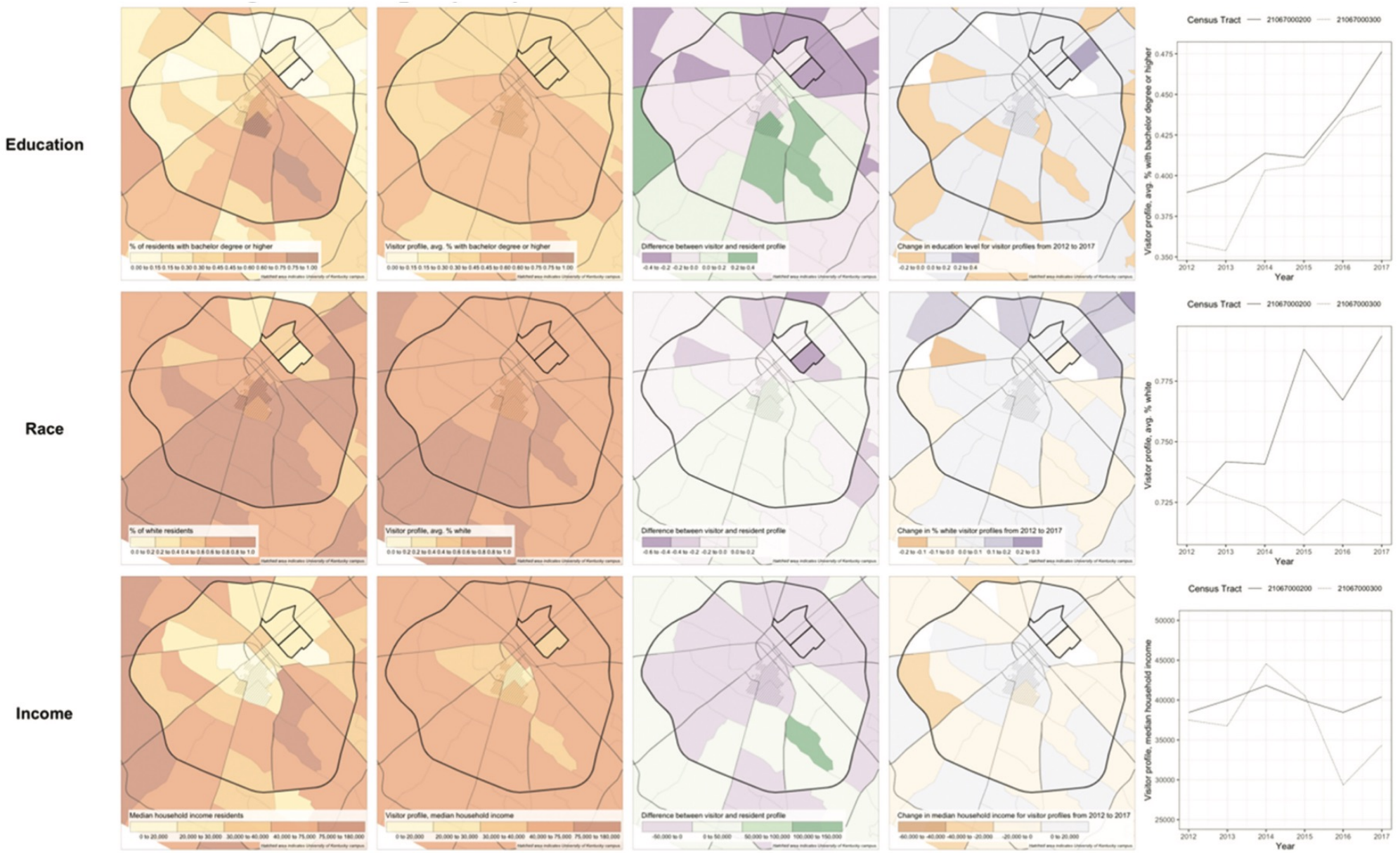


Figure 9. Indicators of educational attainment, race and class in Lexington, KY. column 1: census tract characteristics. column 2: characteristics of average visitor profile to census tract. column 3: difference between columns 1 and 2. column 4: change in the characteristics of average visitor profile to census tract between the two study periods. column 5: average visitor profile for census tracts 2 and 3 over time, 2012–2017.

The consequences of gentrification

- Recent trends
  - The focus on social and psychological aspects of disadvantaged groups
    - Smith, R. J., et al. (2018). "Aging in Place in Gentrifying Neighborhoods: Implications for Physical and Mental Health." *Gerontologist* 58(1): 26-35.
    - Yan, J. H. and H. X. H. Bao (2018). "A prospect theory-based analysis of housing satisfaction with relocations: Field evidence from China." *Cities* 83: 193-202.
    - Wynne, L. and D. Rogers (2020). "Emplaced Displacement and Public Housing Redevelopment: From Physical Displacement to Social, Cultural, and Economic Replacement." *Housing Policy Debate*.
    - Watt, P. (2021). "Displacement and estate demolition: multi-scalar place attachment among relocated social housing residents in London." *Housing Studies*.

The behavioural tool - Anchoring effect

- Wheel of fortune experiment (Tversky, A. and D. Kahneman, 1974, "Judgment under Uncertainty - Heuristics and Biases." *Science* 185(4157): 1124-1131.)
  - Anchor: a starting point from which insufficient adjustment is made. It's a broader concept than reference point (i.e., reference points are often relevant, whilst anchor points could be completely irrelevant to the decision)
  - What's the percentage of African countries in the United Nations?
  - Respondents spun a wheel of fortune before answering the question.
  - The wheel was painted with numbers from 0 to 100, but rigged to show 10 or 65 only
  - Respondents were asked whether the number of African nations in the United Nations was greater than or less than that number, and then estimate the actual figure
  - The actual number is about 30% at the time

Scenarios	Outcomes
The wheel showed 65	45%
The wheel showed 10	25%

Anchoring effect

- Ariely, D., et al. (2003). "Coherent arbitrariness": Stable demand curves without stable preferences. *Quarterly Journal of Economics* 118(1): 73-105.
  - Higher vs. lower two-digit numbers groups have huge differences in valuations
  - 55 MBA students in a marketing research class at Carnegie Mellon University
  - A wide range of ordinary consumer products were considered in the lab experiment
  - Students were asked whether they would buy each good for a dollar figure equal to the last two digits of their social security number (Price 1)
  - They then state a dollar maximum willingness-to-pay (WTP) for the product (Price 2)
  - The incentive-compatible Becker-Degroot-Marschak procedure is used to decide whether students can buy the product (i.e., a random generated price is lower than either Price 1 or Price 2).

Anchoring effect

- Ariely, D., et al. (2003). "Coherent arbitrariness": Stable demand curves without stable preferences. *Quarterly Journal of Economics* 118(1): 73-105.

AVERAGE STATED WILLINGNESS-TO-PAY SORTED BY QUINTILE OF THE SAMPLE'S SOCIAL SECURITY NUMBER DISTRIBUTION

Quintile of SS# distribution	Cordless trackball	Cordless keyboard	Average wine	Rare wine	Design book	Belgian chocolates
1	$ 8.64	$16.09	$ 8.64	$11.73	$12.82	$ 9.55
2	$11.82	$26.82	$14.45	$22.45	$16.18	$10.64
3	$13.45	$29.27	$12.55	$18.09	$15.82	$12.45
4	$21.18	$34.55	$15.45	$24.55	$19.27	$13.27
5	$26.18	$55.64	$27.91	$37.55	$30.00	$20.64
Correlations	.415	.516	0.328	.328	0.319	.419
	$p = .0015$	$p < .0001$	$p = .014$	$p = .0153$	$p = .0172$	$p = .0013$

The last row indicates the correlations between Social Security numbers and WTP (and their significance levels).

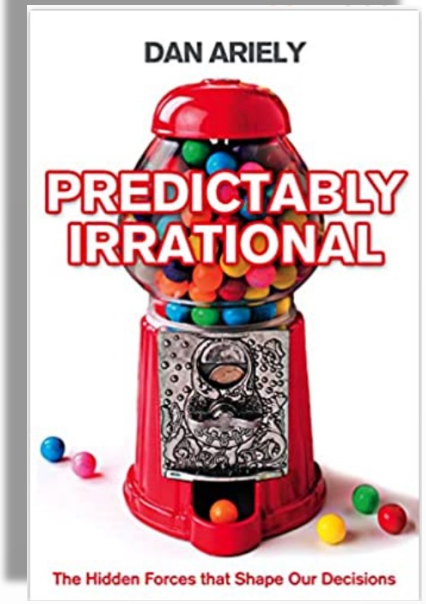
- See also: Ariely, D. , 2008, *Predictably irrational : the hidden forces that shape our decisions*. New York, Harper.

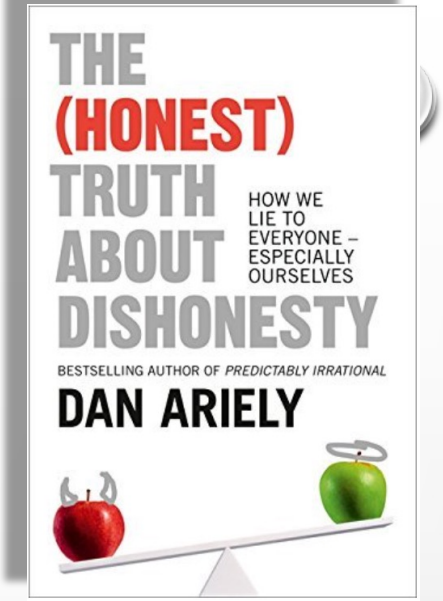
Fraudulent data raise questions about superstar honesty researcher

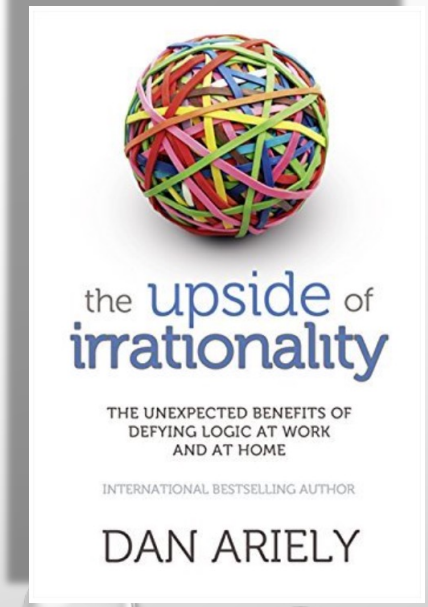
Dan Ariely denies fabricating data, but can't produce records to clear his name

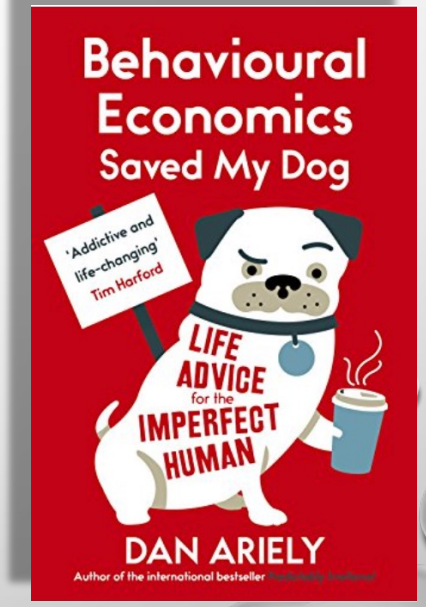
24 AUG 2021 · 4:10 PM · BY CATHLEEN O'GRADY

"I wish I had a good story," says Duke University behavioral scientist Dan Ariely. "And I just don't." LENGEMANN/WELT/ULLSTEIN BILD/GETTY IMAGES









Source:
1. https://www.science.org/content/article/fraudulent-data-set-raise-questions-about-superstar-honesty-researcher
2. https://www.economist.com/graphic-detail/2021/08/20/a-study-on-dishonesty-was-based-on-fraudulent-data

Rank	Title	Authors	Source Title	Publication Year	Total Citations	Average per Year	2020	2021	2022
1	The Dishonesty of Honest People: A Theory of Self-Concept Maintenance	Mazar, Nina; Amir, On; Ariely, Dan	JOURNAL OF MARKETING RESEARCH	2008	1351	90.07	177	155	67
2	Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially	Ariely, Dan; Bracha, Anat; Meier, Stephan	AMERICAN ECONOMIC REVIEW	2009	751	53.64	77	125	48
3	Beautiful faces have variable reward value: fMRI and behavioral evidence	Aharon, I; Etcoff, N; Ariely, D; Chabris, CF; O'Connor, E; Breiter, HC	NEURON	2001	735	33.41	33	28	12
4	**Coherent arbitrariness: Stable demand curves without stable preferences**	**Ariely, D; Loewenstein, G; Prelec, D**	**QUARTERLY JOURNAL OF ECONOMICS**	**2003**	**693**	**34.65**	**48**	**48**	**24**
5	Procrastination, deadlines, and performance: Self-control by precommitment	Ariely, D; Wertenbroch, K	PSYCHOLOGICAL SCIENCE	2002	547	26.05	53	61	21
6	Seeing sets: Representation by statistical properties	Ariely, D	PSYCHOLOGICAL SCIENCE	2001	528	24	72	52	18
7	Contagion and Differentiation in Unethical Behavior: The Effect of One Bad Apple on the Barrel	Gino, Francesca; Ayal, Shahar; Ariely, Dan	PSYCHOLOGICAL SCIENCE	2009	523	37.36	71	62	20
8	Wine online: Search costs affect competition on price, quality, and distribution	Lynch, JG; Ariely, D	MARKETING SCIENCE	2000	476	20.7	18	21	9
9	Effort for payment - A tale of two markets	Heyman, J; Ariely, D	PSYCHOLOGICAL SCIENCE	2004	465	24.47	34	58	20
10	Building a Better America-One Wealth Quintile at a Time	Norton, Michael I.; Ariely, Dan	PERSPECTIVES ON PSYCHOLOGICAL SCIENCE	2011	462	38.5	79	59	29
11	Unable to resist temptation: How self-control depletion promotes unethical behavior	Gino, Francesca; Schweitzer, Maurice E.; Mead, Nicole L.; Ariely, Dan	ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES	2011	449	37.42	54	62	35
12	SCIENCE AND SOCIETY Neuromarketing: the hope and hype of neuroimaging in business	Ariely, Dan; Berns, Gregory S.	NATURE REVIEWS NEUROSCIENCE	2010	418	32.15	48	51	19
13	The heat of the moment: The effect of sexual arousal on sexual decision making	Ariely, D; Loewenstein, G	JOURNAL OF BEHAVIORAL DECISION MAKING	2006	417	24.53	31	29	17
14	The IKEA effect: When labor leads to love	Norton, Michael I.; Mochon, Daniel; Ariely, Dan	JOURNAL OF CONSUMER PSYCHOLOGY	2012	372	33.82	63	65	33
15	Too tired to tell the truth: Self-control resource depletion and dishonesty	Mead, Nicole L.; Baumeister, Roy F.; Gino, Francesca; Schweitzer, Maurice E.; Ariely, Dan	JOURNAL OF EXPERIMENTAL SOCIAL PSYCHOLOGY	2009	345	24.64	22	32	15
28	**Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end**	**Shu, Lisa L.; Mazar, Nina; Gino, Francesca; Ariely, Dan; Bazerman, Max H.**	**PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA**	**2012**	**203**	**18.45**	**30**	**24**	**10**
29	What makes you click?-Mate preferences in online dating	Hitsch, Guenter J.; Hortacsu, Ali; Ariely, Dan	QME-QUANTITATIVE MARKETING AND ECONOMICS	2010	185	14.23	21	25	12

A study on dishonesty was based on fraudulent data

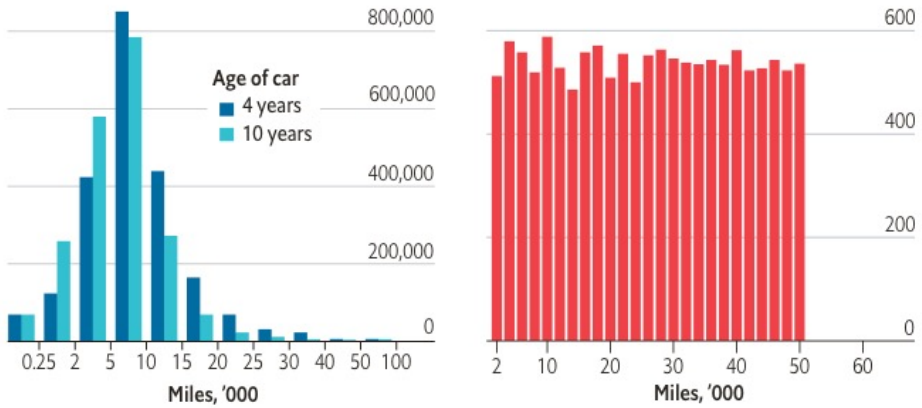
The numbers were clearly faked. No one will admit to faking them

Aug 20th 2021 *(Updated Dec 20th 2021)*

Share Give

Lies, damned lies and faked statistics

Distribution of miles driven, number of cars



Source: Data Colada

*Mileage allegedly self-reported during experiment minus mileage before experiment. Time interval unknown

IF YOU WRITE a book called "The Honest Truth About Dishonesty", the last thing you want to be associated with is fake data. Yet this is where Dan Ariely, a behavioural economist at Duke University, finds himself, along with his four co-authors of an influential study about lying.

Source:
1. https://datacolada.org/98
2. https://www.economist.com/graphic-detail/2021/08/20/a-study-on-dishonesty-was-based-on-fraudulent-data

Round up the usual suspects

Distribution of final digit in reported mileages, 2012 field experiment, United States, %

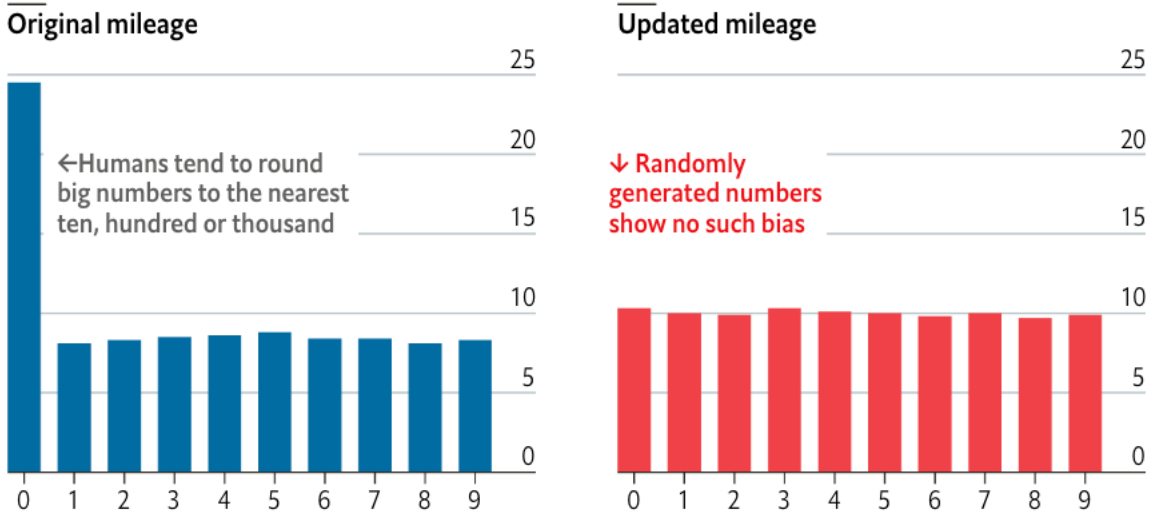
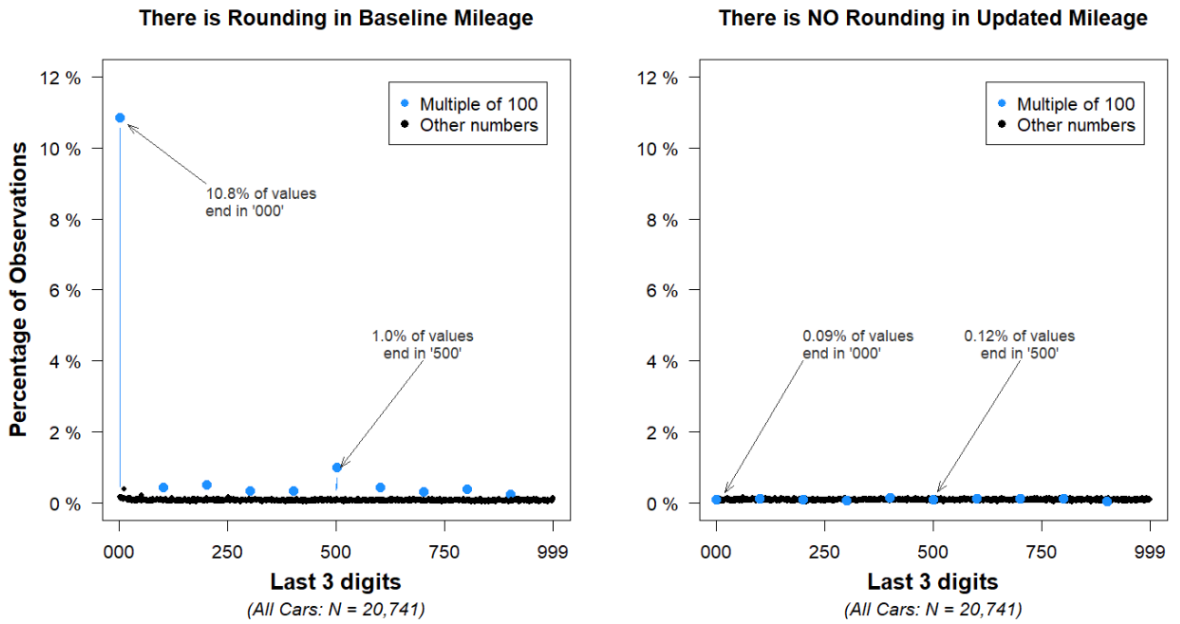


Figure 3. Last Three Digits at Baseline (Time 1) vs Updated (Time 2)



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Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end

Proceedings of the National Academy of Sciences (PNAS)

Shu, Lisa L.; Mazar, Nina; Gino, Francesca; Ariely, Dan; Bazerman

Vol. 109 Issue 38, pp. 15197-15200, 2012

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Shu, LL; Mazar, N; (...); Bazerman, MH

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Many written forms required by businesses and governments rely on honest reporting. Proof of honest intent is typically provided through signature at the end of, e. g., tax returns or insurance policy forms. Still, people sometimes cheat to advance their financial self-interests-at great costs to society. We test an easy-to-implement method to discourage dishonesty: signing at the beginning ı ... Show more

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Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end

Lisa L. Shu[a], Nina Mazar[b,1], Francesca Gino[c], Dan Ariely[d], and Max H. Bazerman[c]

[a]Kellogg School of Management, Northwestern University, Evanston, IL 60208; [b]Rotman School of Management, University of Toronto, Toronto, ON, Canada M5S 3E6; [c]Harvard Business School, Harvard University, Boston, MA 02163; and [d]Fuqua School of Business, Duke University, Durham, NC 27708

Edited* by Daniel Kahneman, Princeton University, Princeton, NJ, and approved July 23, 2012 (received for review June 11, 2012)

Many written forms required by businesses and governments rely on honest reporting. Proof of honest intent is typically provided through signature at the end of, e.g., tax returns or insurance policy forms. Still, people sometimes cheat to advance their financial self-interests—at great costs to society. We test an easy-to-implement method to discourage dishonesty: signing at the beginning rather than at the end of a self-report, thereby reversing the order of the current practice. Using laboratory and field experiments, we find that signing before–rather than after–the opportunity to cheat makes ethics salient when they are needed most and significantly reduces dishonesty.

morality | nudge | policy-making | fraud

the extent that written reports feel more distant and make it easier to disengage internal moral control than verbal reports, written reports are likely to be more prone to dishonest conduct (3, 10, 11). However, for both types of reports (verbal or written) we hypothesize a pledge to honesty to be more effective before rather than after self-reporting. Thus, in this work, we test an easy-to-implement method of curtailing fraud in *written* reports: signing a statement of honesty at the beginning rather than at the end of a self-report that people know from the outset will require a signature.

Results and Discussion

Experiment 1 tested this intervention in the laboratory, using two different measures of cheating: self-reported earnings (income)

Anchoring effect in housing market – lab experiment

- Scott, P. J. and C. Lizieri (2012). "Consumer house price judgements: new evidence of anchoring and arbitrary coherence." *Journal of Property Research* 29(1): 49-68.
  - Experiment conducted in classroom, with 139 undergraduate students (representative of first-time homebuyers)
  - 45 minutes long, with £5 paid for participation, and a potential reward of £10 or £20 depending on performance (incentive-based method)
  - The last three digits of the mobile phone number is used as an arbitrary anchor (i.e., "write down the last three digits of your mobile telephone number as a price in thousands of pounds")
  - Information about four properties in Cambridge was provided next (a virtual tour including photographic and textual information)
  - Estimated sale prices are reported. £20 reward if estimation is within £2000 of the true sale price, and £10 for within £2000 and £10,000.

Anchoring effect in housing market – lab experiment

- Scott, P. J. and C. Lizieri (2012). "Consumer house price judgements: new evidence of anchoring and arbitrary coherence." *Journal of Property Research* 29(1): 49-68.

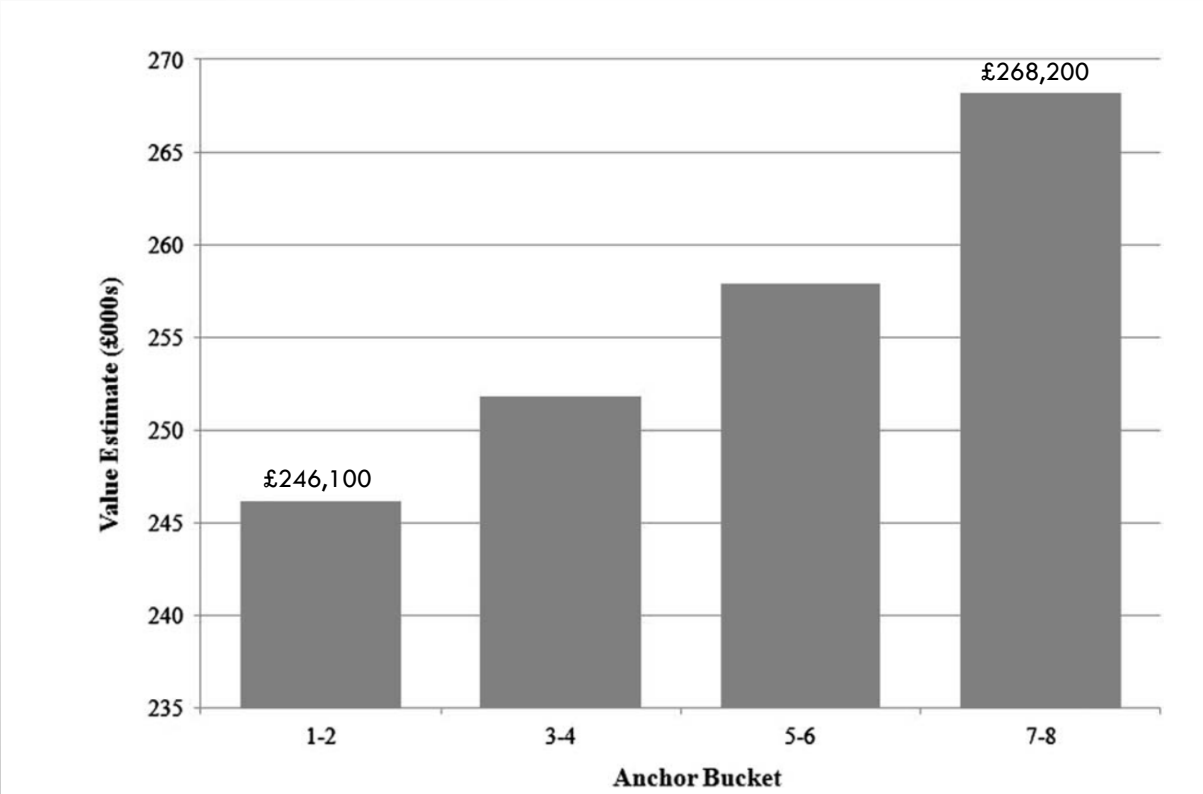


Figure 1. Mean value judgements listed by anchor bucket.

- 10 'anchor buckets' based on the first digit of the anchor
- 0 and 9 are omitted because they 'do not provide reasonable anchors'
- Buckets are grouped so that the data are effectively split into quartile by anchors
- Data are 'Winsorized' to remove extremely inaccurate answers
- F = 1.142, p-value = 0.336

Anchoring effect in housing market – lab experiment

- Scott, P. J. and C. Lizieri (2012). "Consumer house price judgements: new evidence of anchoring and arbitrary coherence." *Journal of Property Research* 29(1): 49-68.

$$Value\ Estimate = \alpha + \beta\ AnchorBucket + \epsilon$$

Table 1. Relationship between the natural logarithm of the value estimate and arbitrary anchor bucket.

	Estimated value of house	
	(1)	(2)
Intercept, α	5.470	5.452
	(0.037)	*(0.039)*
Anchor 1 – top/bottom 5% truncated	0.014*	
	(0.007)	
Anchor 2 – errors +/– 60% truncated		0.013*
		(0.008)
n	99	105
Adjusted r^2	0.025	0.018
Significance F	*0.063*	*0.088*

Note: *Significant at the 10% level.

Anchoring effect in housing market – lab experiment

- Scott, P. J. and C. Lizieri (2012). "Consumer house price judgements: new evidence of anchoring and arbitrary coherence." *Journal of Property Research* 29(1): 49-68.

$$Average\ Value\ Estimate = \alpha + \beta\ AnchorBucket + \epsilon$$

Table 2. Relationship between the average value estimate and arbitrary anchor bucket.

	Average estimated value of house	
	(1)	(3)
Intercept, α	239,218	236,276
	(3,398)	*(2,769)*
Anchor 1 – top/bottom 5% truncated	3,730**	
	(672.8)	
Anchor 2 – errors +/– 60% truncated		3,445***
		(548.3)
n	8	8
r^2	0.84	0.85
Significance F	*0.014*	*<0.001*

Notes: ***Significant at the 1% level. **Significant at the 5% level.

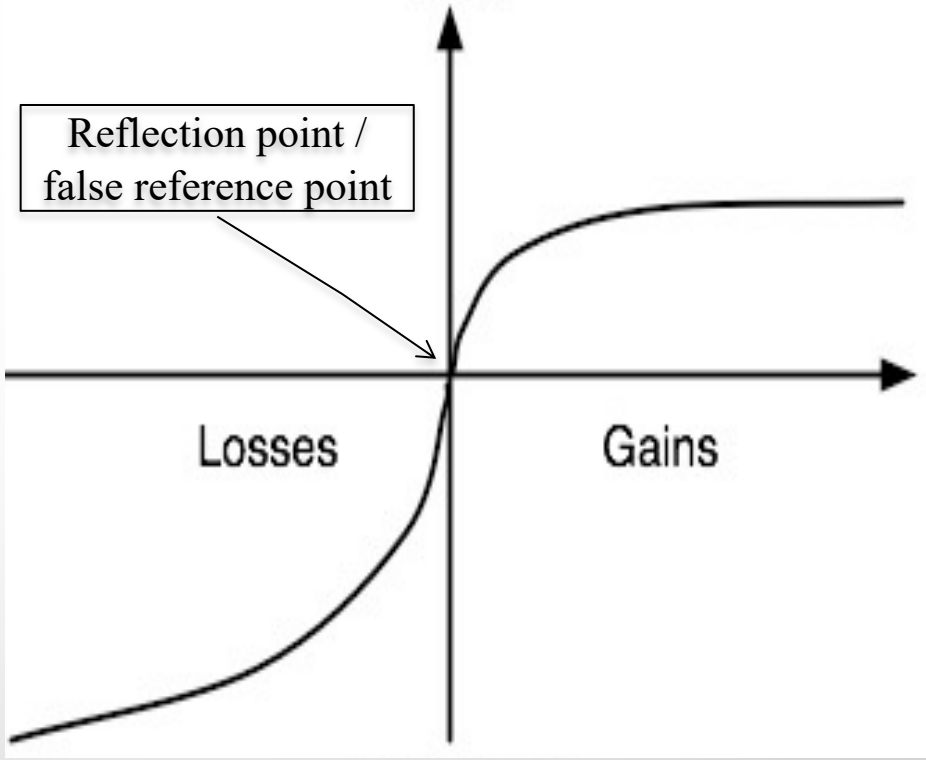
Anchoring effect in housing market – field experiment

- Seiler, M. J., V. L. Seiler, et al. (2012). "Mental Accounting and False Reference Points in Real Estate Investment Decision Making." *Journal of Behavioral Finance* 13(1): 17-26.
  - Field experiment
  - Actual owners of investment real estate properties
  - Two experiments: in isolation and as part of an overall portfolio
  - Internet-based survey in 2009
  - 533 usable responses
  - Safety check throughout the survey, 7 questions in total
  - Testable hypothesis:
    - WTS is constant in all five scenarios (no disposition effect)
    - WTS is the same in experiment 1 and experiment 2 (no mental accounting)

Anchoring effect in housing market – field experiment

- Seiler, M. J., V. L. Seiler, et al. (2012). "Mental Accounting and False Reference Points in Real Estate Investment Decision Making." *Journal of Behavioral Finance* 13(1): 17-26.

- Disposition effect: people are more willing to sell an investment at a gain than they are to sell investments at a loss, ceteris paribus
- Willingness-to-sell curve: concave for returns above zero and convex below.
- False reference point: the breaking even, or a zero return, in the willingness-to-sell curve.



Anchoring effect in housing market – field experiment

- Seiler, M. J., V. L. Seiler, et al. (2012). "Mental Accounting and False Reference Points in Real Estate Investment Decision Making." *Journal of Behavioral Finance* 13(1): 17-26.

1. Assume you bought a home as an investment property (you do not live in the home) one year ago at a price associated with each of the following 5 scenarios. Today, the price of the home is exactly $300,000. If you were to sell the home today, you would have to pay a total of $20,000 in realtor fees, closing costs, and so forth.
Over the next 12 months, you believe there is a 50% chance of the home increasing in price by $20,000 and a 50% chance the price will decrease by $20,000. **How likely are you to sell this investment property today?** Please circle a number in each of the five rows in the last column where "1" = Definitely would NOT sell the home and "9" = Definitely would sell the home.

Scenario	Price you paid One year ago	Current Price of the home	Gross Gain/Loss associated with selling	Total cost to sell (Realtor fees, closing costs, etc.)	Net Gain/Loss associated with selling	Likelihood of you selling today (1 = Definitely will NOT sell; 9 = Definitely will sell)
1	$340,000	$300,000	− $40,000	− $20,000	− $60,000	1 2 3 4 5 6 7 8 9
2	$320,000	$300,000	− $20,000	− $20,000	− $40,000	1 2 3 4 5 6 7 8 9
3	$300,000	$300,000	$ 0	− $20,000	− $20,000	1 2 3 4 5 6 7 8 9
4	$280,000	$300,000	+ $20,000	− $20,000	$ 0	1 2 3 4 5 6 7 8 9
5	$260,000	$300,000	+ $40,000	− $20,000	+ $20,000	1 2 3 4 5 6 7 8 9

Please answer number 3 for this question.

1 2 3 4 5 6 7 8 9

Anchoring effect in housing market – field experiment

- Seiler, M. J., V. L. Seiler, et al. (2012). "Mental Accounting and False Reference Points in Real Estate Investment Decision Making." *Journal of Behavioral Finance* 13(1): 17-26.

Now assume your investment in stocks increased in value by $20,000 over the same period of time as your real estate investment lost money (last year). Using the same information as before, please indicate on a scale from 1 (Definitely would NOT sell) to 9 (Definitely would sell) **how likely you are to sell your investment property today** by circling a number in each of the 5 rows in the last column.

Scenario	Price you paid One year ago	Current Price of the home	Gross Gain/Loss associated with selling	Total cost to sell (Realtor fees, closing costs, etc.)	Net Gain/Loss associated with selling	Profit made in the stock market over the same period	Combined Net Profit from all investments over the period	Likelihood of you selling today (1 = Definitely will NOT sell; 9 = Definitely will sell)
1	$340,000	$300,000	− $40,000	− $20,000	− $60,000	+ $20,000	− $40,000	1 2 3 4 5 6 7 8 9
2	$320,000	$300,000	− $20,000	− $20,000	− $40,000	+ $20,000	− $20,000	1 2 3 4 5 6 7 8 9
3	$300,000	$300,000	$ 0	− $20,000	− $20,000	+ $20,000	$ 0	1 2 3 4 5 6 7 8 9
4	$280,000	$300,000	+ $20,000	− $20,000	$ 0	+ $20,000	+ $20,000	1 2 3 4 5 6 7 8 9
5	$260,000	$300,000	+ $40,000	− $20,000	+ $20,000	+ $20,000	+ $40,000	1 2 3 4 5 6 7 8 9

Anchoring effect in housing market – field experiment

- Seiler, M. J., V. L. Seiler, et al. (2012). "Mental Accounting and False Reference Points in Real Estate Investment Decision Making." *Journal of Behavioral Finance* 13(1): 17-26.

	Scenario									
	1		2		3		4		5	
A: Willingness to Sell Scores										
Real Estate in Isolation	2.14		2.36		2.95		4.02		5.73	
t-stats		5.89***		10.13***		13.85***		20.66***		
Overall Portfolio	2.27		2.53		3.42		4.73		5.86	
t-stats		6.64***		12.76***		16.46***		16.91***		
Degree of Mental Accounting (difference)	.14**		.18***		.48***		.72***		.13*	

Note.
1. The test statistics reported in Part A are from Paired-Samples T-Tests. *indicates significance at the 10% level; **indicates significance at the 5% level; ***indicates significance at the 1% level.

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.
  - Data source: cadastral survey conducted in 1875 in İstanbul by the Turkish government of the time
  - 315 pieces of real estate from three regions (out of about 8,000 entries)
  - Surveyors appraised values of the real properties, and recorded their physical features
  - Statistically significant positive relationship between door numbers and appraised values
  - Rational explanations are considered, and none is found to be explanatory

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.

$$\ln(Value) = \alpha + \beta \times \ln(Door\#) + error.$$

Regression results with all observations. Standard errors in parenthesis.

N = 315	I	II	III	IV	V
Constant	8.48*** (0.14)	7.67*** (0.17)	7.79*** (0.17)	7.74*** (0.2)	7.48*** (0.22)
Ln(Door#)	0.36*** (0.04)	0.37*** (0.03)	0.28*** (0.03)	0.27*** (0.03)	0.25*** (0.03)
Rooms		0.1*** (0.01)	0.1*** (0.02)	0.11*** (0.02)	0.15*** (0.02)
Masonry			0.94*** (0.14)	0.82*** (0.14)	−0.03 (0.3)
Residence w/o garden				0.11 (0.11)	−0.17 (0.31)
Kiosque				0.05 (0.43)	1.81* (0.76)
Shop				0.32 (0.31)	0.48 (0.36)
Land				0.054 (0.28)	0.29 (0.26)
Other				−0.26 (0.24)	0.55 (0.3)
Rooms * Masonry					0.09* (0.04)
Rooms * Residence w/o garden					0.05 (0.04)
Rooms * Kiosque					−0.1** (0.03)
Rooms * Shop					0.37*** (0.06)
Rooms * Other					−0.081** (0.03)
R2	0.21	0.48	0.54	0.55	0.64

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.

Estimated size effects according to four different models.

Expected Appraised value		$V(25)$	$V(50)$	$V(100)$
Model 1 ($\widehat{\beta}_{Door}$=0.249)	N = 315 (all properties)	84	100	119
Model 2 ($\widehat{\beta}_{Door}$=0.311)	N = 236 (area known)	80	100	124
Model 3 ($\widehat{\beta}_{Door}$=0.171)	N = 94 (rent known)	89	100	112
Model 4 ($\widehat{\beta}_{Door}$=0.269)	N = 85 (rent and area known)	83	100	120

- Normalized the appraised values by setting V (50) = 100
- 100% increase in door number, ceteris paribus, increases appraised value by 10–25%.
- After conducting a similar exercise using the results of Scott and Lizieri (2012), we see that 100% increase in anchor (i.e. phone number's last three digit) causes 3–6% increase in judgement (i.e. appraised real estate value).

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.
- Alternative, rational explanations considered:
  - Buildings with low door numbers could be close to the inner-city where real properties were maybe cheap at the time, and high door numbers could be located in the periphery where real properties were maybe expensive
  - Older buildings could be numbered earlier so they would have lower door numbers. In other words, door number would act as a proxy of the building age, which certainly affects value
  - Both locational and age variables are missing from the dataset

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.

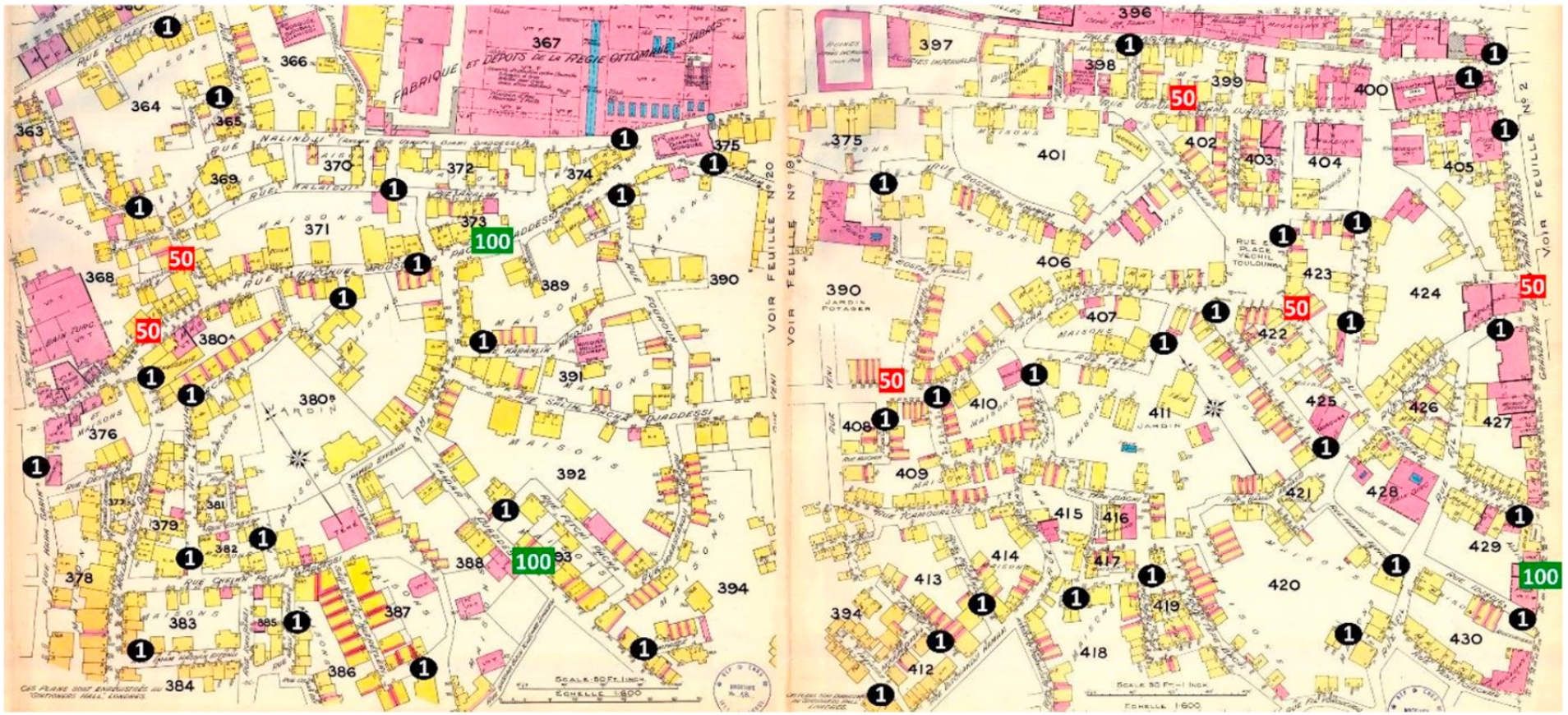


Fig. 3. The full cadastral map of Cibali region in 1904, with highlighted door numbers 1, 50, 100.

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.

Table 9
Multivariate Kolmogorov-Smirnov test of uniform distribution. The significance level is 5%.

Door#	1	50	100
K-S statistic	0.108	0.249	0.11
Critical value	0.20	0.52	0.7
H_0: Uniform distribution	Cannot be rejected	Cannot be rejected	Cannot be rejected

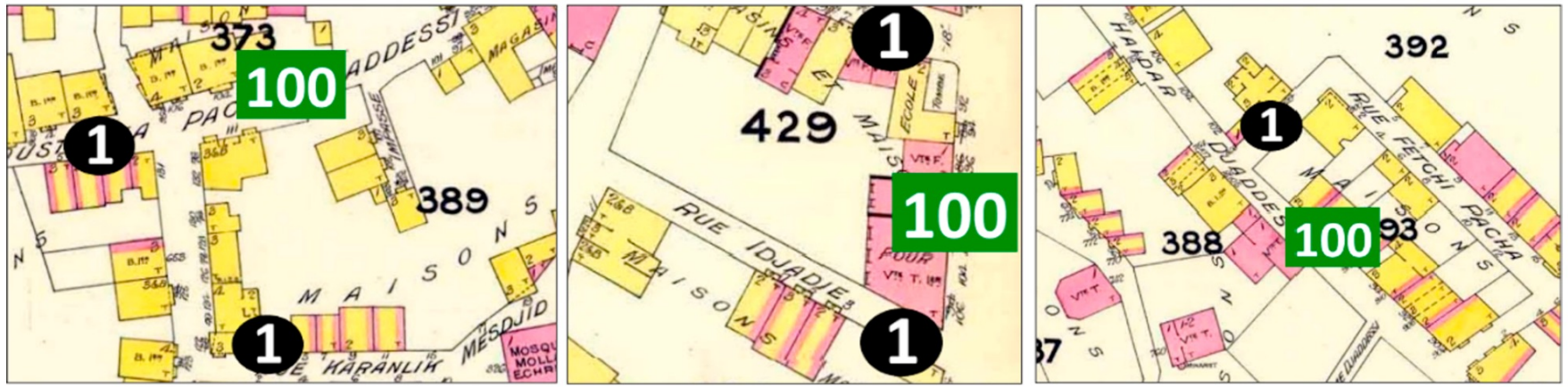


Fig. 4. All houses with door number 100 on Goad street map of Cibali produced in 1904.

Anchoring effect in housing market – field evidence

- Unveren, B. and K. Baycar (2019). "Historical evidence for anchoring bias: The 1875 cadastral survey in Istanbul." *Journal of Economic Psychology* 73: 1-14.
  - Strengths:
    - Good external validity: field evidence rather than lab experiment with students
    - Ruled out alternative explanations (omitted variable bias)
    - Estimate effect size of anchoring effect
  - Weaknesses:
    - Small sample size
    - Data and map are 30 years apart

Mega events and their impact

- Muller, M. (2015). "The Mega-Event Syndrome: Why So Much Goes Wrong in Mega-Event Planning and What to Do About It." *Journal of the American Planning Association* **81**(1): 6-17.
  - Mega-events are one-time occasions of a fixed duration that attract a large number of visitors and have worldwide reach.
  - Come with significant costs and long-term impacts on the built environment and the population of the host countries or cities.
  - Examples:
    - Olympic Games
    - Football World Cup
    - World's Fairs (Expos)
    - EURO 2020
    - Super Bowl

Mega events and their impact

Table 5.1: Cost and revenue of Olympic Games (1996 – 2018)

Year	City	Cost		Revenue			Mediated reach			National expenditure (% of GDP, 2018)		
		Final cost (billon $)	As % of GDP in hosting year	From TV rights fees (million $)	From ticket sales (million $)	As % of final cost	Number of countries /territories broadcasted	Global television audience (billion)	Video views (billion)	Education	Health	R&D
1996	Atlanta (USA)	3.6	0.04	898	425	37	214	--	--	5.6	16.8	2.8
1998	Nagano (Japan)	15.2	0.38	514	74	4	160	--	--	3.8	10.9	3.3
2000	Sydney (Australia)	6.9	1.66	1332	551	27	220	--	--	5.1	9.4	2.2
2002	Salt Lake City (USA)	2.5	0.02	738	183	37	160	--	--	5.6	16.8	2.8
2004	Athens (Greece)	16	7.82	1494	228	11	220	--	--	4.1	8.4	1.0
2006	Torino (Italy)	4.5	0.23	831	89	20	200	--	--	4.5	9.0	1.3
2008	Beijing (China)	45	0.98	1739	185	4	220	3.5	0.7	4.3	5.3	2.1
2010	Vancouver (Canada)	7.6	0.47	1280	250	20	220	1.8	0.3	5.5	10.4	1.6
2012	London (UK)	18	0.68	2569	988	20	220	3.6	1.9	5.6	9.9	1.7
2014	Sochi (Russia)	51	2.47	1289	204	3	220	2.1	1.4	4.1	5.6	1.1
2016	Rio de Janeiro (Brazil)	20	1.11	2868	321	16	220	3.2	3.2	5.8	8.9	1.2
2018	Pyeongchang (South Korea)	12.9	0.80	1436	143	12	220	1.9	4.4	5.0	7.4	4.2

Source: International Olympic Committee, The World Bank, United Nations, and the Chinese government offical website.

Mega events and their impact

- Muller, M. (2015). "The Mega-Event Syndrome: Why So Much Goes Wrong in Mega-Event Planning and What to Do About It." *Journal of the American Planning Association* **81**(1): 6-17.

Table 1. The mega-event syndrome: symptoms and consequences.

Symptom	Description	Consequences
1. Overpromising of benefits	Overestimating positive effects of mega-events	• Misallocation of resources • Loss of trust with citizenry
2. Underestimation of costs	Actual budget > planned budget	• Misallocation of resources • Profiteering • Subpar construction quality • Budget shortfalls
3. Event takeover	Event priorities become planning priorities	• Event needs displace urban infrastructure needs • Oversized infrastructure • Unfinished infrastructure
4. Public risk taking	Public takes risk for private benefits	• Public funds for limited or no public benefits • Profiteering
5. Rule of exception	Suspension of regular rule of law	• Displacement • Reduced public oversight • Limited public participation
6. Elite capture	Inequitable distribution of resources	• Spatially uneven urban landscape • Gentrification
7. Event fix	Mega-events become seemingly quick fixes for major planning challenges	• Event determines national priority for funding • Bypassing of regular planning process • Waste of resources on event as lever for urban development

The Beijing 2008 Olympic Games

- Over 300 billion CNY (approximately 45 billion USD) was spent to event preparation between 2002 and 2008
- Invested heavily in infrastructure, environment, and public security

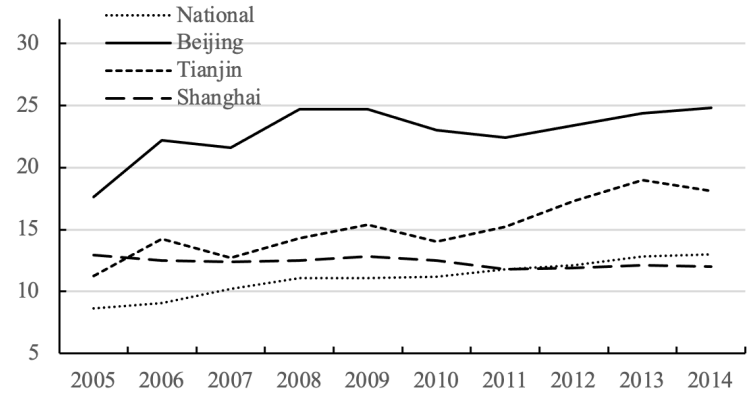


Figure 5.1 Motor Vehicles for Public Transport per 10 000 Population

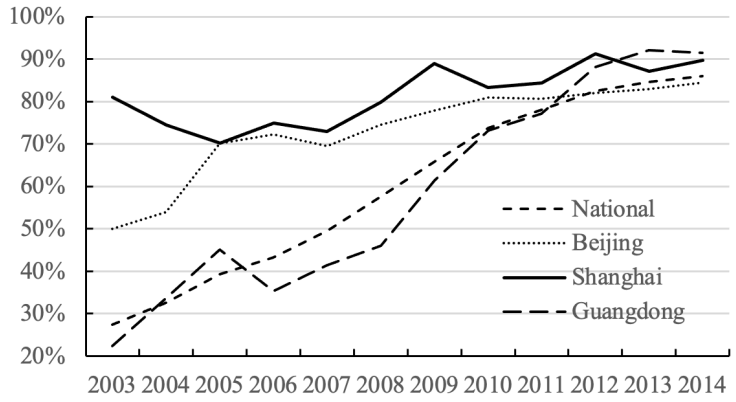


Figure 5.3 Sewage Treatment Rate in Beijing (%)

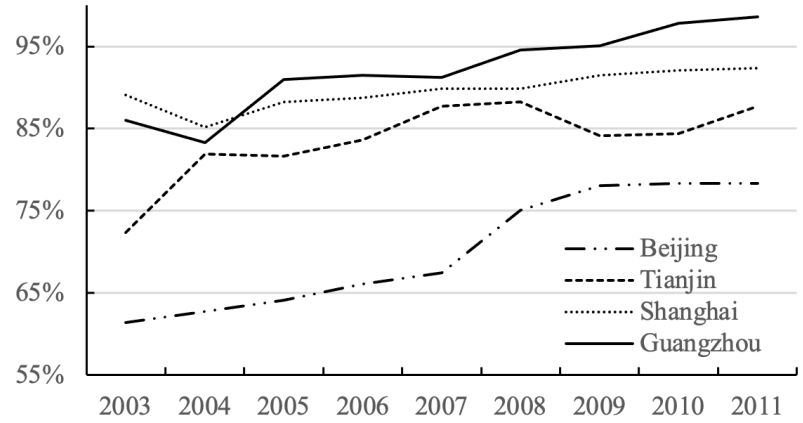


Figure 5.2 Days of air quality that met the national standard (%)

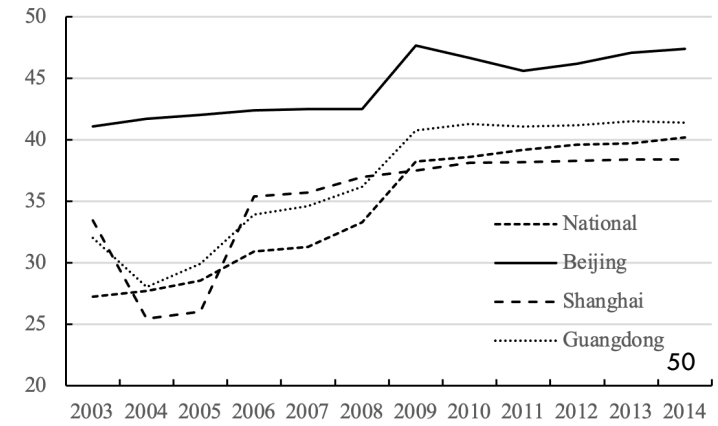


Figure 5.4 Urban Green Coverage Ratio (%)

Data and methods

- Survey interviews conducted in 2009, about a year after the Olympic Games.
- The gap between the event and the interviews is long enough for the residents to appreciate the changes in their daily life introduced by the Olympic Games, and is also short enough to minimize the effect of confounding factors.
- Respondents: renters living in the areas that are close to the event venues, and had plans to purchase their own homes before the event.
- Sample size: 396
- Logistic regression

Data and methods

1.8.2 **奥运会后**，您认为奥运会在以下几方面实际造成了多大的影响呢？
（显著改善=10，显著恶化=0）

a) 市政基础建设

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

b）治安

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

c) 康乐设施

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

d）环境

0	1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

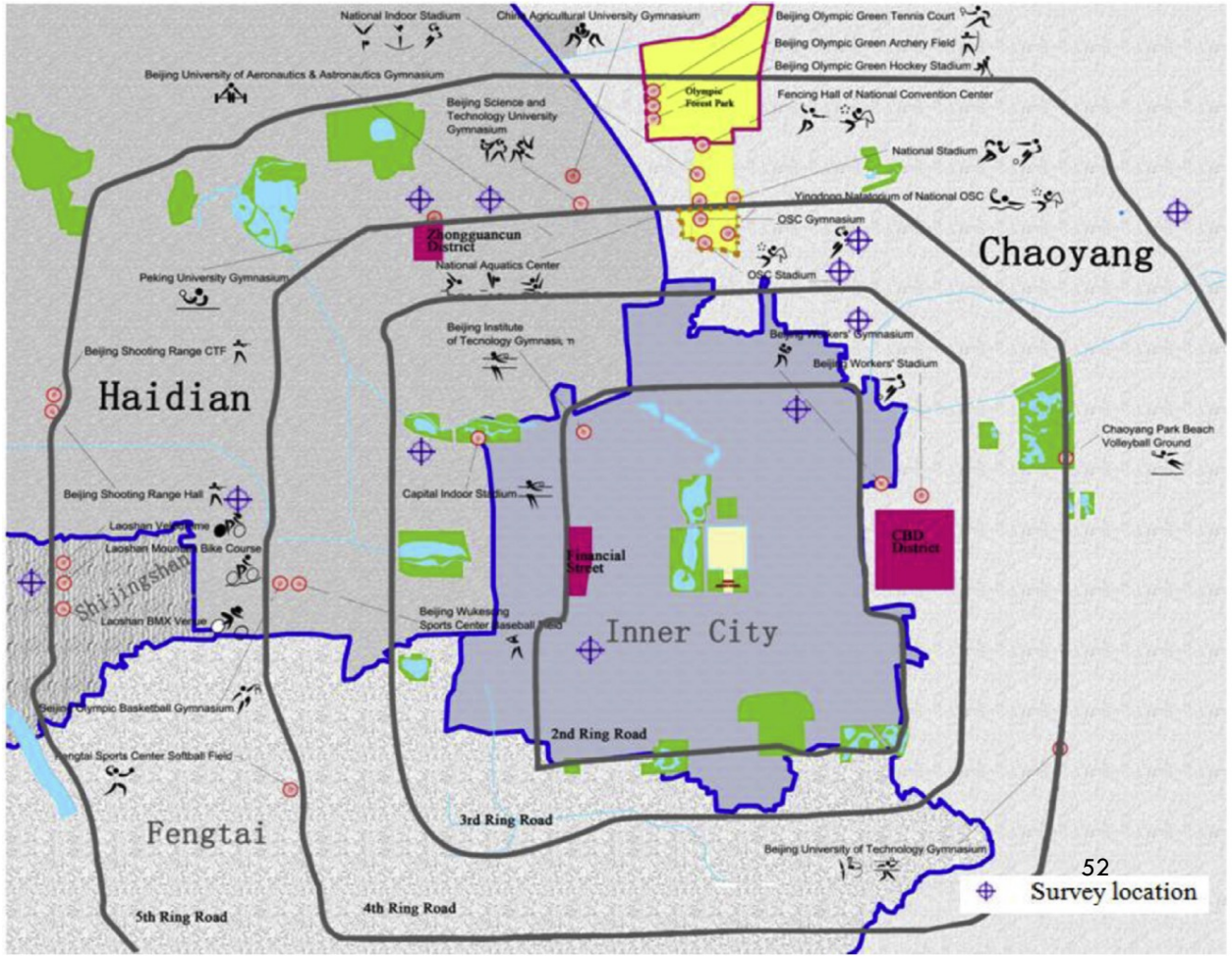
1.9.1.1 您最常用的出行方式有以下几种？多选，请划 √

1 步行☐　2 自行车☐　3 公共汽车☐　4 地铁☐　5 私家车☐　6 出租车☐

1.9.1.2 如果经济条件允许的话，您更偏好哪种出行方式呢？请划 √

1 步行☐　2 自行车☐　3 公共汽车☐　4 地铁☐　5 私家车☐　6 出租车☐

1.9.1.3 奥运会对您的出行有何影响？　☐ 更加方便，☐更加不便，☐无影响



Data and methods

Do you anticipate to purchase a home in a location that is inferior to where you planned to live before the Olympic. If the answer is yes, the participants are classified as "anticipated to be involuntarily relocated", and Relocation = 1.

Table 5.2 Variable definitions and descriptive statistics (N = 396)

Variable	Values	Count	Percent	Mean	Standard Deviation
Amenity	= 0 if public amenity is significantly deteriorated, … = 10 if it is significantly improved	--	--	3.47	1.93
Infrastructure	= 0 if urban infrastructure and event facility (sports venues) are significantly deteriorated, … = 10 if it is significantly improved	--	--	5.14	2.41
Environment	= 0 if environment standard is significantly deteriorated, … = 10 if it is significantly improved	--	--	4.37	1.85
Security	= 0 if neighbourhood security is significantly deteriorated, … = 10 if it is significantly improved	--	--	4.88	2.47

Subjective measurements

Table 5.2 Variable definitions and descriptive statistics (N = 396)

Variable	Values	Count	Percent	Mean	Standard Deviation
Relocation	1 = Involuntary, 0 otherwise	161	0.41	0.41	0.49
Hukou	1 = Registered resident, 0 otherwise	145	0.37	0.37	0.48
Age	1 = 18-25	19	4.80	3.19	1.01
	2 = 26-35	75	18.94		
	3 = 36-45	151	38.13		
	4 = 46-55	115	29.04		
	5 = 56-65	34	8.59		
	6 = 65 or above	2	0.51		
Edu	1 = High school	22	5.56	2.98	0.90
	2 = Vocation schools	94	23.74		
	3 = Undergraduate degree	151	38.13		
	4 = Master degree	126	31.82		
	5 = Ph.D degree	3	0.76		
Income	1 = 5,001-7,000	1	0.25	4.92	1.78
	2 = 7,001-9,000	23	5.81		
	3 = 9,001-11,000	85	21.46		
	4 = 11,001-15,000	71	17.93		
	5 = 15,001-20,000	60	15.15		
	6 = 20,001-25,000	69	17.42		
	7 = 25,001-35,000	54	13.64		
	8 = 35,001-50,000	28	7.07		
	9 = 50,001-100,000	5	1.26		
Xicheng	= 1 if Xicheng district, 0 otherwise	32	0.08	0.08	0.27
Haidian	= 1 if Haidian district, 0 otherwise	125	0.32	0.32	0.47

Findings and Discussions

- Subjective measurement of event effects allows negative impact (below average)
- The average score is close to the mid-point for all three variables
- The positive effect of Olympic disappeared within a year (adaptation)
- Abstract and aggregated statistics cannot reveal individual experience

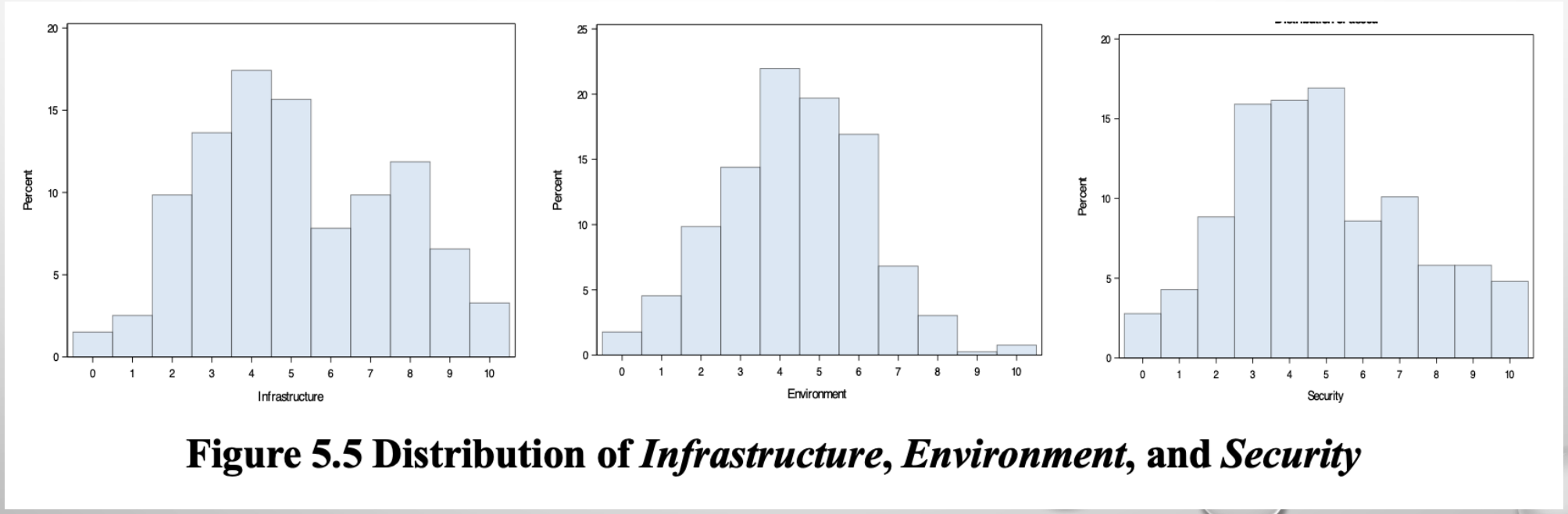


Figure 5.5 Distribution of *Infrastructure*, *Environment*, and *Security*

Findings and Discussions

- If a respondent's evaluation of Olympic Games' impact on local transport, environment, and public security is higher, she is more likely to anticipate a move into a less desirable neighbourhood, or involuntarily relocated due to the effect of the Olympic Games.

Table 5.3 Logistic regression results

Variables	*Coefficient*	*P-value*	*Odds Ratio*
Constant	8.0172	<.0001	
Infrastructure	0.2395	0.0378	1.271
Environment	0.3227	0.0175	1.381
Security	0.2709	0.0178	1.311
Hukou	-1.2883	0.0102	0.276
Education	-1.9929	<.0001	0.136
Income	-1.3011	0.0030	0.272
Xicheng	1.7624	0.0512	5.826
Haidian	0.9251	0.0506	2.522

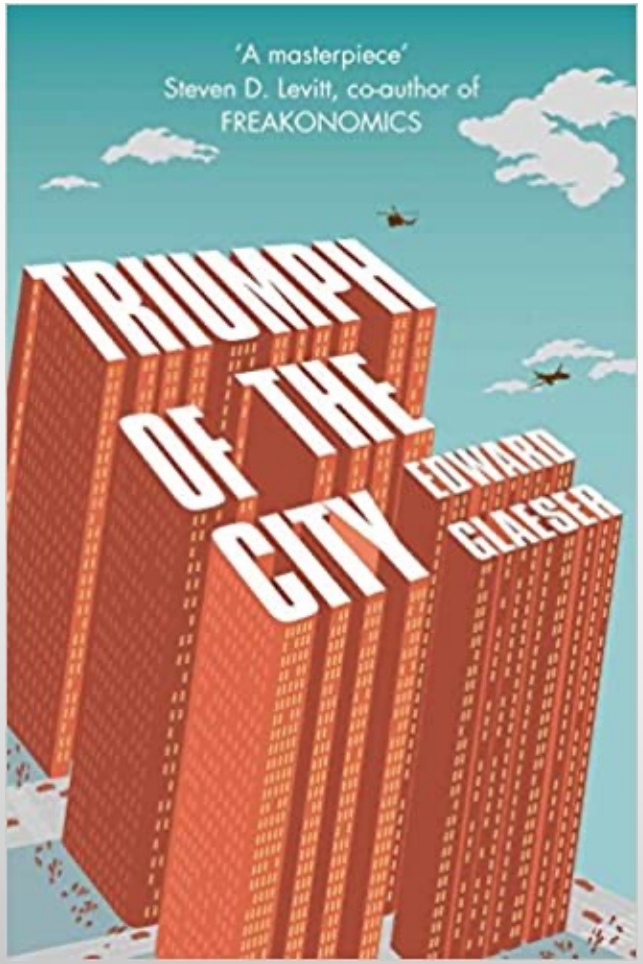
Conclusions

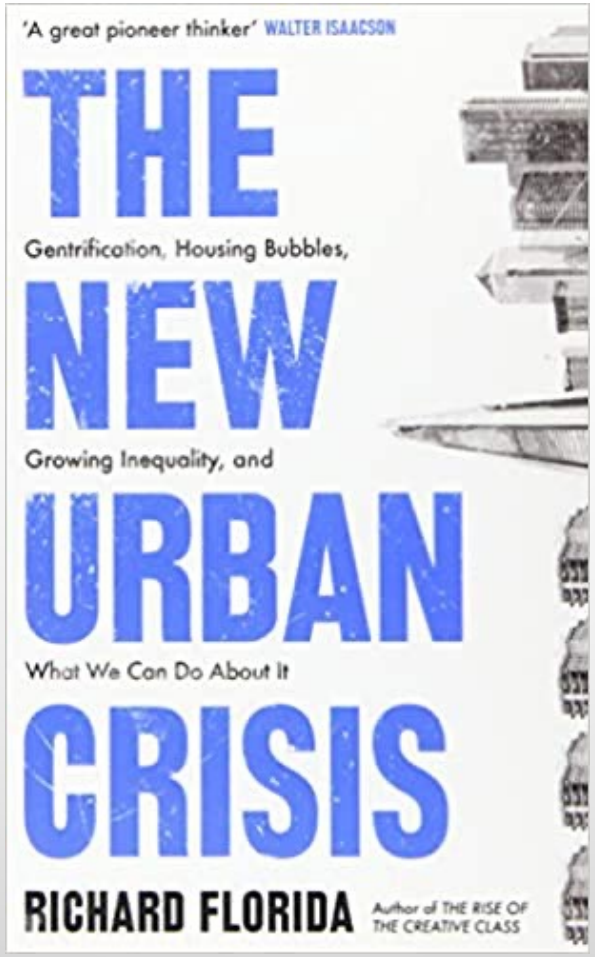
- Field evidence obtained through survey (not experiment)
- Focus on subjective feelings (perception) instead of objective measurements
- Potential missing variable issues (such as time preference, risk preference, job location, commute preference, generational wealth transfer, among others)
- Effect size should be explored (see Wang, M., et al. 2015. "Behavioural insights into housing relocation decisions: The effects of the Beijing Olympics." *Habitat International* 47: 20-28.)

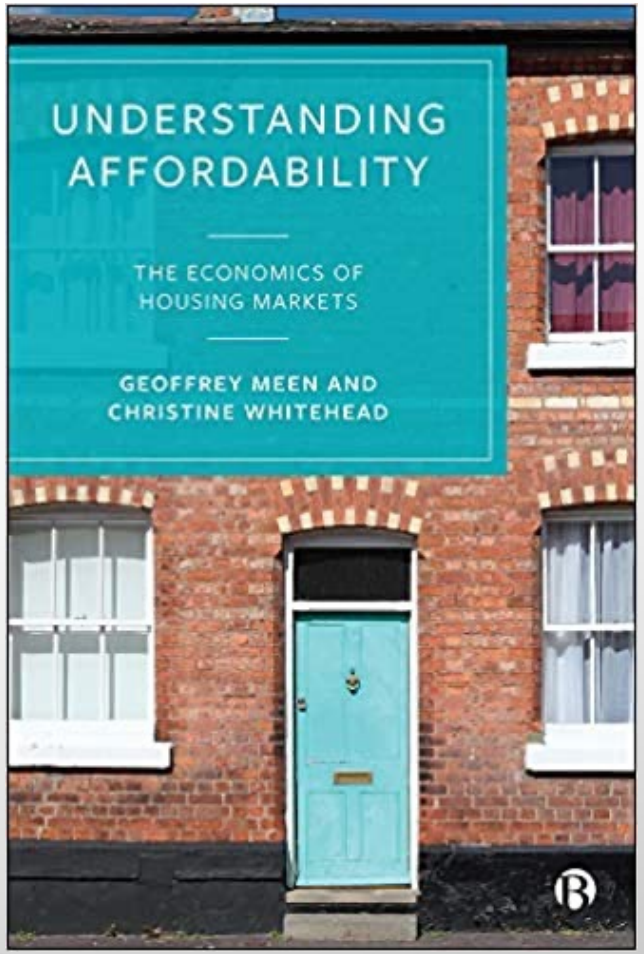
Practical Session

- Open the buyer's questionnaire. Examine the questions included.
- If homeowners (i.e., sellers) are the subjects of this study, what research questions do you want to ask?
- Choose questions from the buyer's questionnaire to answer the questions identified above.
- Think about other behavioural aspects that might be considered when studying government-led gentrification. How are you going to collect the data for such a study?
- Suggest ways that may improve the analysis in this case study.

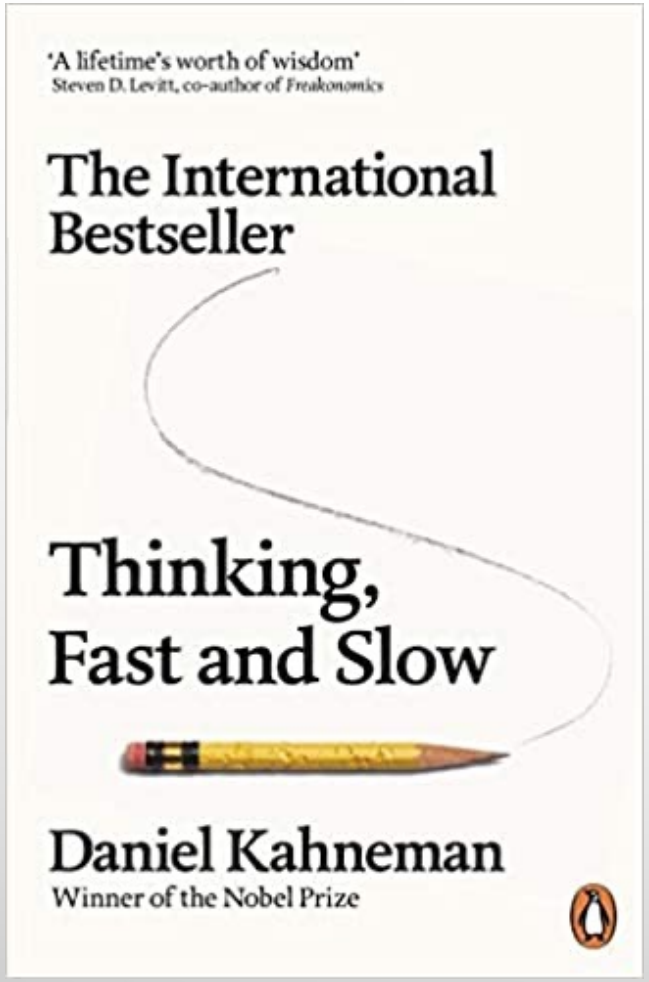
Further readings

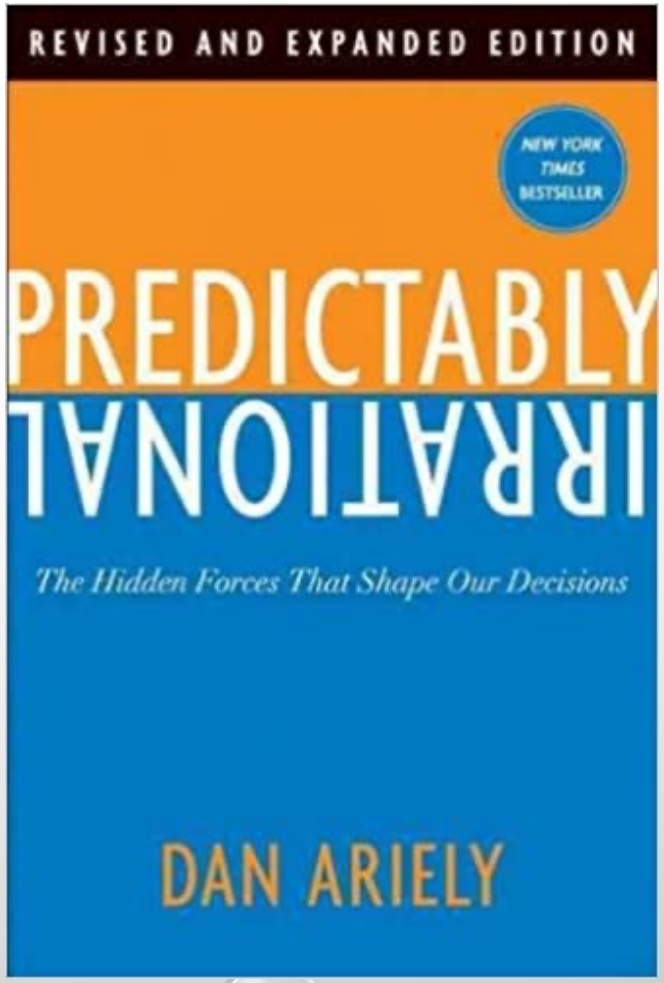






Further readings





Summary

- Research questions
- Gentrification defined
- Consequences of gentrification
- Mega events and their impact on urban environment
- The Beijing 2008 Olympic Games
- Data and methods
- Findings and discussions
- Future research directions