Quantifying the Impact of Scenic Environments on Crime

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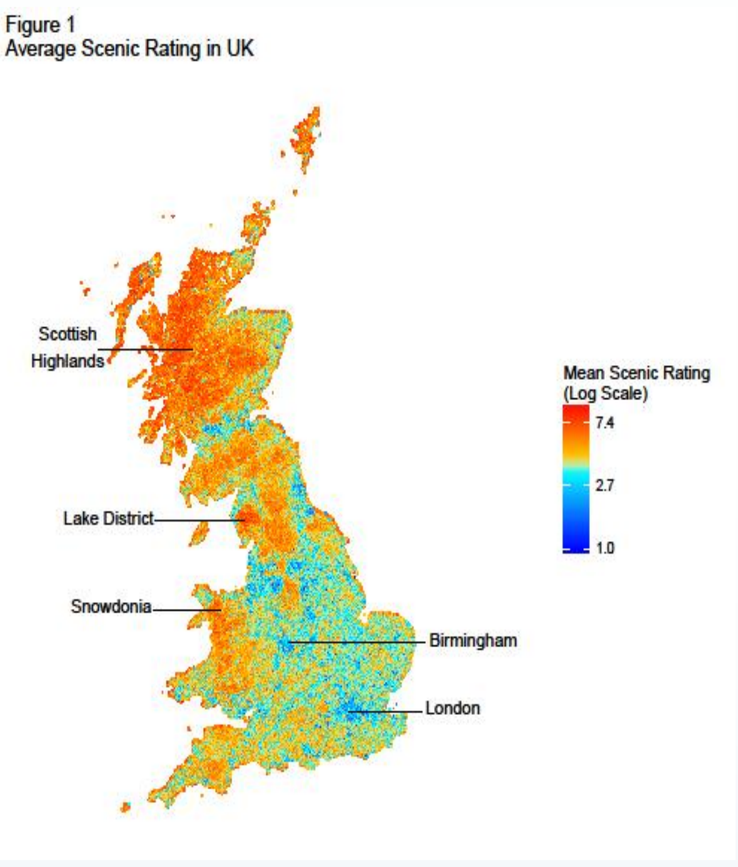
Introduction

- Can human behaviour be determined by scenic environments?
- Are we less likely to commit crimes in more scenic places?
- *Broken Windows Theory* has been around for decades. Can we quantify it?
- Could have big implications for policing policy.

Figure 1
Average Scenic Rating in UK

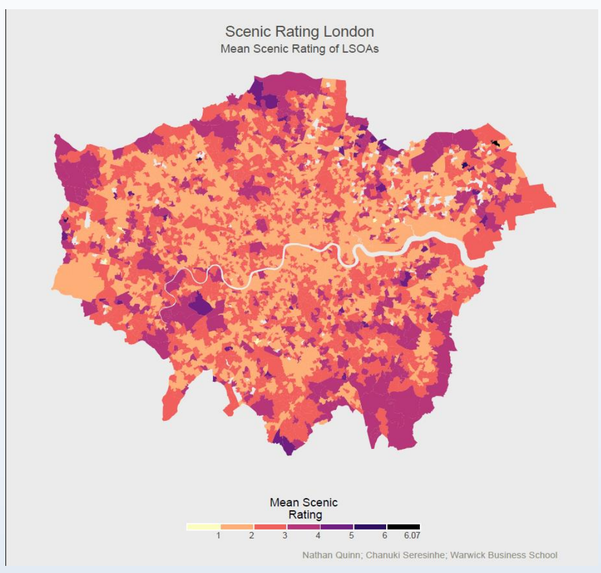


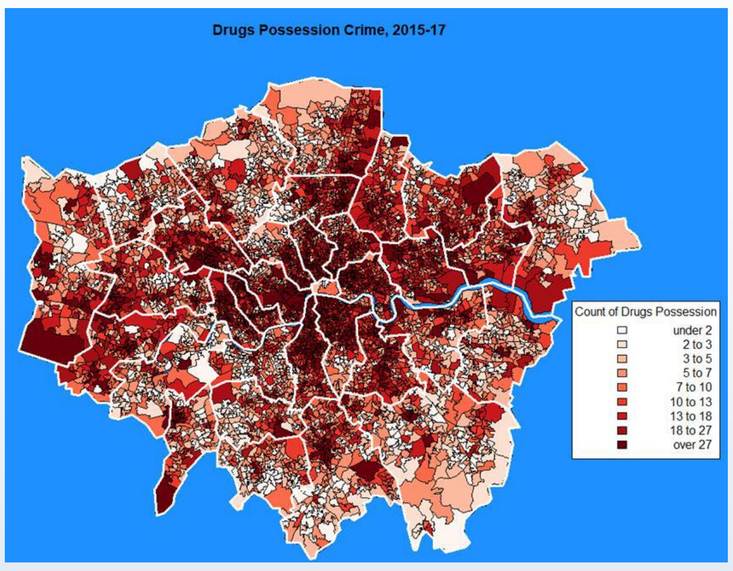
Methods

1. Collect data about 'scenic' areas from the website 'Scenicornot.co.uk'. This asks users to rate images of the UK on a scale of 1 to 10 (e.g. above). The images cover 95% of the UK.
2. Train a computer to tell which images are scenic and not. Use the computer to create much more data.
3. This method of data collection is time consuming, so the study will focus on central London.
4. Get data on total crimes committed over a 2 year period from the metropolitan police.
5. Control for income and education, amongst other things, by including indicators of deprivation data, available from the ONS.
6. Create CAR (conditional auto-regressive) models to account for spatial auto-correlation in the data. Crime is the response variable.
7. Use FDR (false detection rate) method to adjust p-values. Then check if scenic rating is still statistically significant.

Results

- Violence, Robbery and Criminal Damage all have 'Scenic Rating' significant at the 10% level (p=0.0872, p=0.0697, p=0.0583 respectively). While the coefficients of scenic rating are -5.46, -0.87, -1.15 respectively.
- This suggest as scenic rating increases, crime count goes down.
- However, upon using the FDR method, these significance levels change to 0.145, 0.116 and 0.117 respectively. Not quite significant enough to conclude relevance.
- One minor category, Grievous Bodily Harm, has p value 0.0680 after using FDR method. Which is significant at the 10% level.





Conclusions

- Not enough evidence to suggest a direct link between scenic rating and crime levels yet.
- Improvements could be made to the method in the future. For example, more data could be collected, including for larger areas and different cities.
- More variables (or less) could be included in the various models, for example, levels of tourism.
- 'Wounding/GBH' had a p value of 0.0680. More data would be needed however, and in other locations to conclude there is a strong connection between scenic rating and GBH.

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