The Geography of London's Recent Beer Brewing Revolution

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Summary
In this paper we examine the recent rapid growth of new breweries in London and the reasons behind it. Using open data from the Companies House database augmented with other online and printed sources, we show that the rapid growth of breweries, particularly since 2011, has exhibited a clear spatial pattern. Ripley's K analysis reveals as soon as we see new breweries emerging, they are clustering in space. Local Moran's I and DBSCAN analyses reveal that Bermondsey and Hackney are particular locational hotspots for brewing. Using Bermondsey as a case study, we highlight a number of interacting physical, social and economic factors that help foster this growth.

KEYWORDS: Brewing, Spatial Analysis, London,

1. Introduction

In the 50 years between the mid-1920s and the mid-1970s, the number of breweries operating in the United Kingdom fell from some 2000 to just 87 (Dixon, 1978; SIBA, 2010). In 1970s and 80s further closures, takeovers and mergers combined with the changing tastes and drinking habits of the beer drinking populous meant that some of the most famous and well established names in British beer disappeared from the taps and pumps of British pubs. However, anyone buying a pint in a British pub in recent years may have noticed that the ubiquitous brands of the large multinational beer conglomerates have slowly started to share tap space with a growing variety of alternative producers. It is fair to say that the brewing industry in the UK has undergone something of a renaissance in recent times and London has played a big part in this story.

By the early 1990s only a handful of brewers remained in London, and of the London breweries operating today only the Meantime Brewery in Greenwich and Fullers were operating before the turn of the Millennium. By mid-2016, London was home to some 84 active breweries and brewpubs – a huge increase in a very short space of time. In this paper, we use data from Companies House to examine the spatial and temporal evolution of brewing in London in recent times and try to answer two simple research questions:

1. Where are these new breweries locating, is there any discernible spatial pattern and why are they locating where they do?
2. How has London's brewing renaissance evolved over time and what are the driving forces behind it?

2. Spatial Analysis

In the first stage of our analysis, we calculate Ripley's K statistic for a series of different years to ascertain whether brewing exhibits any spatial clustering. The results (Figure 1) suggest that in 2016 for all radii around breweries between around 100m to 1800m, we can observe more breweries than

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we would expect to find under a condition of Complete Spatial Randomness (where the observed value of K in blue falls above the expected value of K in red). This clustering is most pronounced at radii of around 500 and 1000 metres – distances that are sufficiently small that we may think of these almost as local neighbourhood level clusters with it only taking around 10-15 minutes to walk 1000 metres. For years where the total number of breweries in the city is small (1985-2011) there are too few points to carry out a meaningful analysis, however, in 2012/2013 when brewing is really starting to take off again within the city, new breweries are not locating randomly; they are tending to cluster within distances of around 2km of each other.

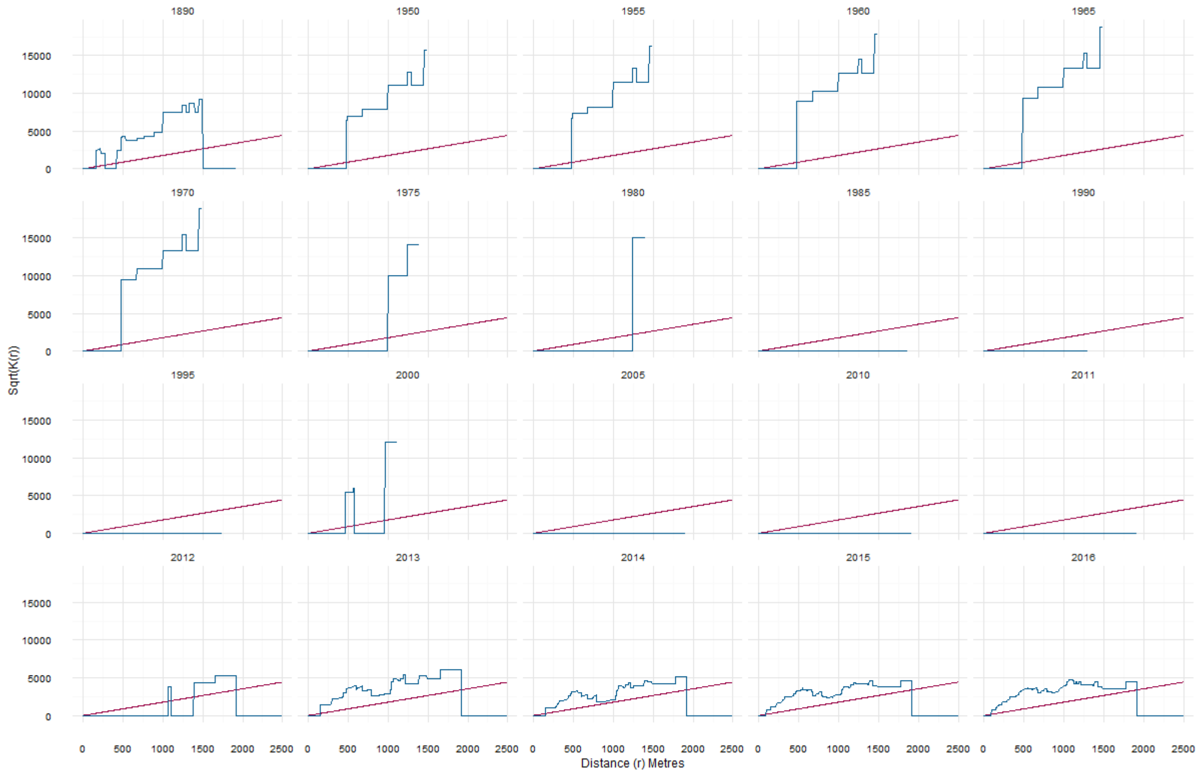

Figure 1: Values of Ripley's K for London Breweries, selected years.

Ripley's *K* is able to give us a sense that some interesting clustering of breweries is occurring within London from around 2013 onwards, but it is not able to show *where* this clustering is occurring. In order to get a sense of the geography of brewery clustering, we use calculate local Moran's I scores Anselin (1995) (Figure 2) and run a DBSCAN analysis (Ester et al., 1996) (Figure 3) which allow us to answer our first research question and highlight compellingly that brewing in London is now very much a central London activity rather than an activity spread evenly across the city, with clusters of breweries locating just a few hundred metres from each other in the inner boroughs of Southwark, Tower Hamlets, Islington, Hackney and Lambeth.

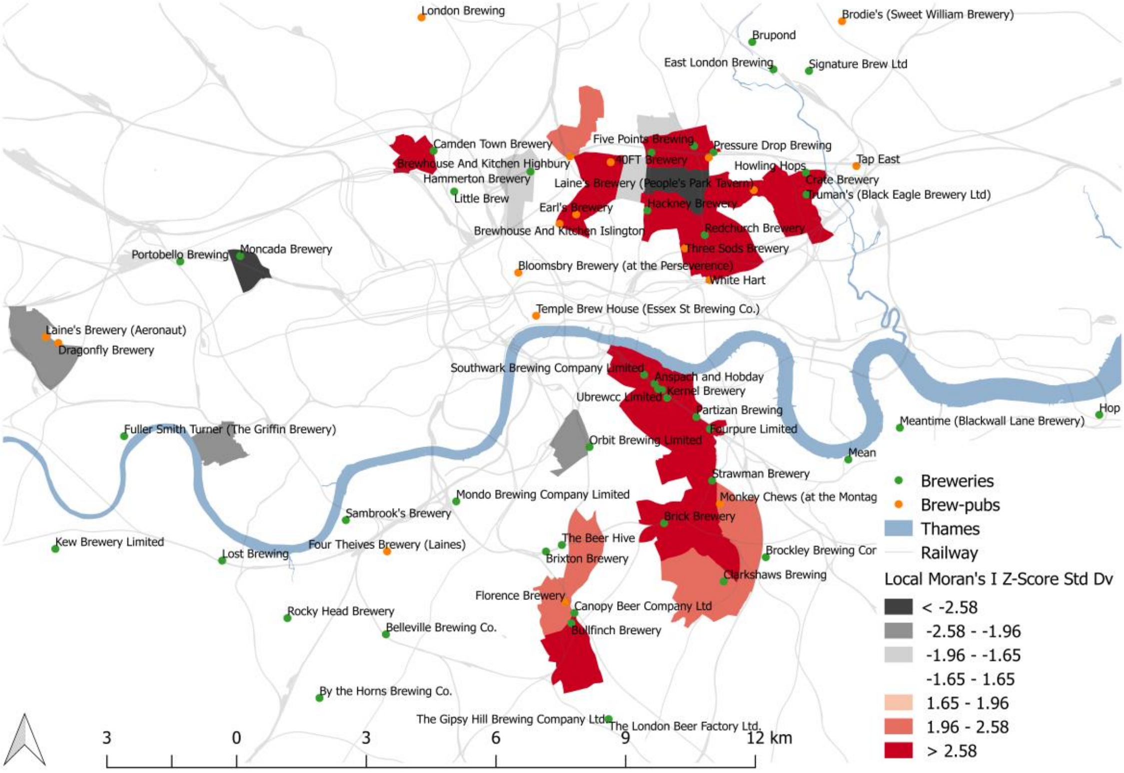

Figure 2 - Local Moran’s I Z-score standard deviations for brewery intensity, 2016, by 2011 Census Wards in London.

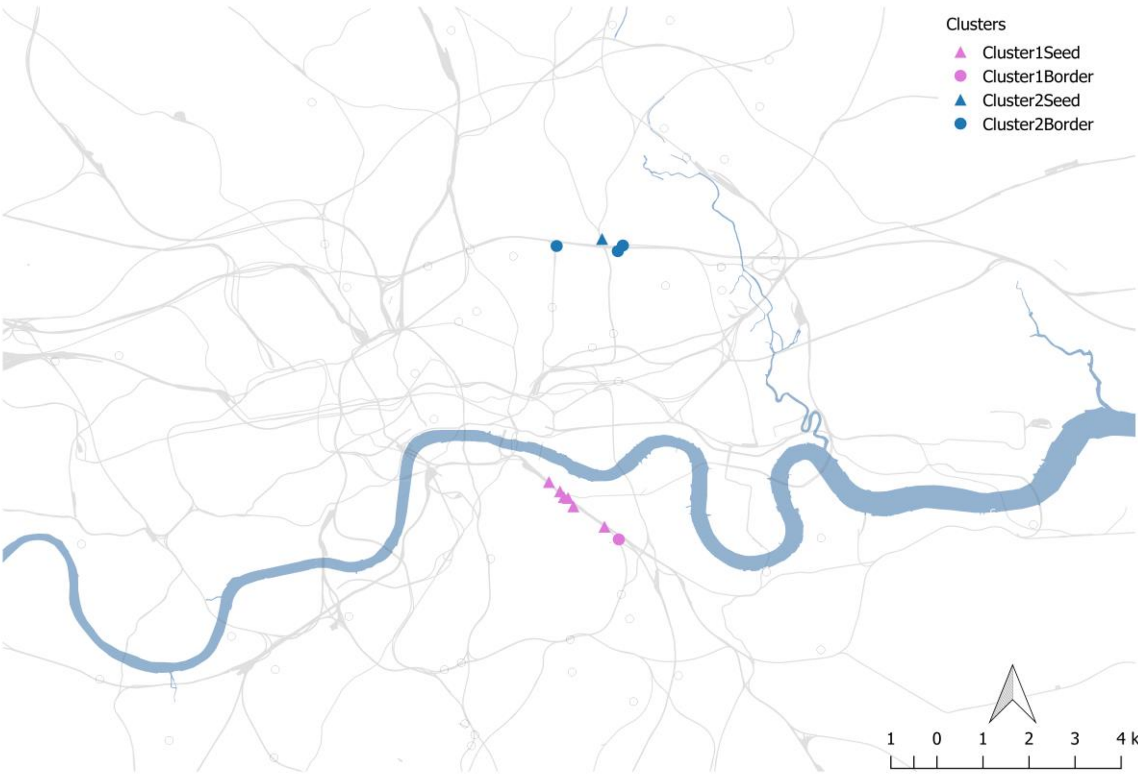

Figure 3 – Results of one DBSCAN analysis: Clusters, eps = 1100, minpts = 4

3. Case Study and Discussion

To help answer the question of why this renaissance is occurring, how it has evolved in recent years and the driving forces behind it, we focus in on the Bermondsey cluster as a case study. Here we are able to highlight a number of influential factors which have helped create this new brewing geography in London, including the role of the railway and the particular geographies it has created in London; other (influential) breweries (Karaca, 2015); the sharing economy (Hawkes, 2013); modern technologies; macroeconomic conditions (particularly the introduction of progressive beer duty in 2002 (Lucas, 2010) and the global financial crisis in 2008) and the market – particularly the big change in the way that beer is sold directly to customers as well as to retailers – in facilitating the growth of new breweries. The story of Kernel arriving in Bermondsey under a railway arch in 2009, after the financial crisis and after the head brewer had become inspired by travel abroad and encouraged by a local community of enthusiasts, is a story that has been repeated with only minor variations across the capital.

Brewing in London is now a story of physical and socio-economic geographies. The railway has long played a role in brewing in the UK, but it is only with a recent programme of renovations by network rail that they have been able to become spaces of brewing, and this has led to a distinctive physical geography. This is key because these arches are still owned by the railway, and allow the breweries relatively cheap spaces close to the centre of the city and frequently near important transport hubs. But these transport hubs are not important for the transportation of beer to market, but rather customers to brewers as the dynamic of brewer customer interaction has changed markedly from previous decades. Now a great number of customers will purchase their beer directly from brewers in temporary tap-rooms in the breweries themselves, with the brewers taking advantage of a shift in the buying habits of customers, away from anonymous mass production and towards the authenticity, legitimacy and quality of craft production. Breweries have not been alone in exploiting the renovation of these spaces and shift in consumer attitudes, and find themselves amongst other new foodstuff's and markets. Hence, Bermondsey has seen the recent birth of both the 'Bermondsey Beer Mile' and the Maltby Street Market.

Another key element of the London story is what we have termed 'economies of cooperation'. This comradery between the brewers means that equipment, ideas, knowledge and customers are all shared to the benefit of all. In our case study, the Kernel brewery played a central role in the cooperation economy of the Bermondsey cluster, but other examples abound across the capital.

This study is only the beginning of the story. Although our focus has been the rise of 'craft' breweries in London, there are questions still to be answered about whether there are aspects of this experience that are common to other new breweries in the UK, or whether very different stories emerge. We also cannot be sure how London's brewing landscape will continue to evolve. There are signs that the number of new breweries opening in 2016 will not be as many as in 2014 or 2015, in which case, is this a slowdown? Has London's capacity to support a finite number of microbreweries been met? How sustainable is the London beer drinker's thirst for craft beer? More work needs to be carried out to understand the interactions between the brewers and their market to develop this much more nuanced picture and understand what the prospects for London's new brewing industry might be in the future. Moreover, we are compelled to observe that the UK is not alone in the growth of 'craft' breweries. Much research has already been carried out on the craft brewing industry in the USA, but with Asia, Latin America and much of Europe – even the long-established beer markets of Belgium and Germany - also appearing to be following suit, the evolving global geography of brewing is likely to continue to be of interest to scholars.

4. Biography

Adam Dennett is a Lecturer and Deputy Director of the Bartlett Centre for Advanced Spatial Analysis, University College London. Adam is a Population Geographer with interests in quantitative methods, spatial modelling and GIS.

Sam Page is a PhD student in the Department of Geography, University College London. For his thesis, Sam is researching the 2015 British General Election through the lens of assemblage theory.

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