'How has the process of gentrification shaped social inequality across the Victoria Line'?

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December 1st 2016

Summary

This piece will investigate how gentrification has shaped social inequality across the Victoria Line tube, with particular emphasis on the impact Richard Florida's (2002) 'Creative Class' has had on recent regeneration. In order to do this, all residential properties sold between 2001- 2016, within 500 metres of each station, will be analysed to map changing house prices. 2001 and 2011 Census Data will also be analysed to show the impact Florida's (2002) 'Creative Class' has had on recent gentrification, utilising both his Talent and Inequality Indices. Semi- structured interviews will also be conducted with community stakeholders across the Victoria Line.

1. Introduction

This piece aims to use both GIS and visualisation techniques to demonstrate how gentrification has shaped social inequality across the Victoria Line tube, see Figure 1 for each individual station. To do this, there will be a particular emphasis on Richard Florida's (2002) 'Creative Class' thesis and the impacts this has had on recent gentrification in London. As Florida's (2002) 'Creative Class' has not been used in relation to gentrification studies before, this work will be both pioneering and unique. The Victoria Line has been chosen as, although many gentrification studies have been conducted in London, none have used a tube line as a transect in which to measure regeneration. Hence, by using the Victoria Line, a cross- section of the city can be used to measure the ribbon developments of gentrification.

In order to measure ribbon patterns of gentrification across the Victoria Line three methods have been selected and will be discussed in the following sections. Firstly, using both PostGIS and QGIS all sold residential properties from 2001- 2016 will be selected within a 500 metre radius of each tube- station to map changing housing dynamics (Land Registry, 2016). Secondly, to measure the increasing significance of Florida's (2002) 'Creative Class' across the Victoria Line, 2001 and 2011 Census Data will be used to map Florida's (2002) Talent and Inequality Indices. To visually understand both these indices 'Processing3' will be used to provide an animation of the changing impact the 'Creative Class' is having on each stop, see Figure 1, across the Victoria Line (Florida, 2002). Lastly, semi- structured interviews with community stakeholders across the Victoria Line will be conducted. These will be analysed using Natural Language Processing and will be visually represented in Wordle (2016) (Chowdhury, 2003).
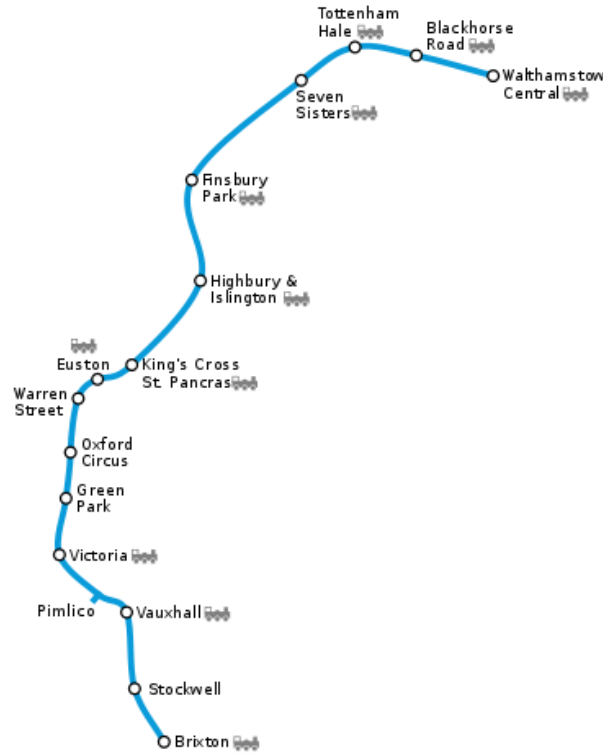
Figure 1: The Victoria Line. Available at: http://www.londontubemap.org.uk/london-tube-map/400px-Victoria_Line.svg.png

2. Methodology

2.1 GIS

The first method in this work, Geographical Information Systems (GIS), will explore how post-2001 gentrification has shaped house prices across the Victoria Line. GIS will be used as it provides a visual representation of a vast amount of data, as shown in Figure's 2 and 3, that can then be used to analyse how house prices have changed from 2001- 2016 across the Victoria Line. To do this, both post-GIS and QGIS will be used and examples of the form these maps will take is shown in Figure's 2 and 3. In order to obtain the house price data, the Land Registry will be used at it has every sale, organised by postcode, since 1995 in its database (Land Registry, 2016). As Figure's 2 and 3 show, QGIS will be used to generate a buffer around each tube station to map how house prices have changed since 2001, keeping the research focused on the Victoria Line itself. Figure 2 and 3 demonstrate the varying buffer sizes that could be used in research, Figure 2 a 500 metre buffer and Figure 3 750 metres. Table 1 shows the differing types of housing stock listed on the Land Registry database that will be delineated using GIS (Land Registry, 2016).

Type of housing stock
1)   Detached
2)   Semi- detached
3)   Terraced
4)   Flat/maisonette
5)   Other

Table 1: Types of housing stock as defined by Land Registry (2016) across the Victoria Line

This method has been chosen as it will provide a visual insight into the changing dynamics of the London housing market and how this is excluding some members of London's population, contributing to social inequality. This changing dynamic can be seen in Figure 2 whereby the standard deviation of flats from 2001- 2016 is highest in Central, North London and lowest toward the Northern terminus of the Victoria Line, Walthamstow Central. The visualisation programme discussed in the next section will also investigate how gentrification is shaping social inequality across the Victoria Line.

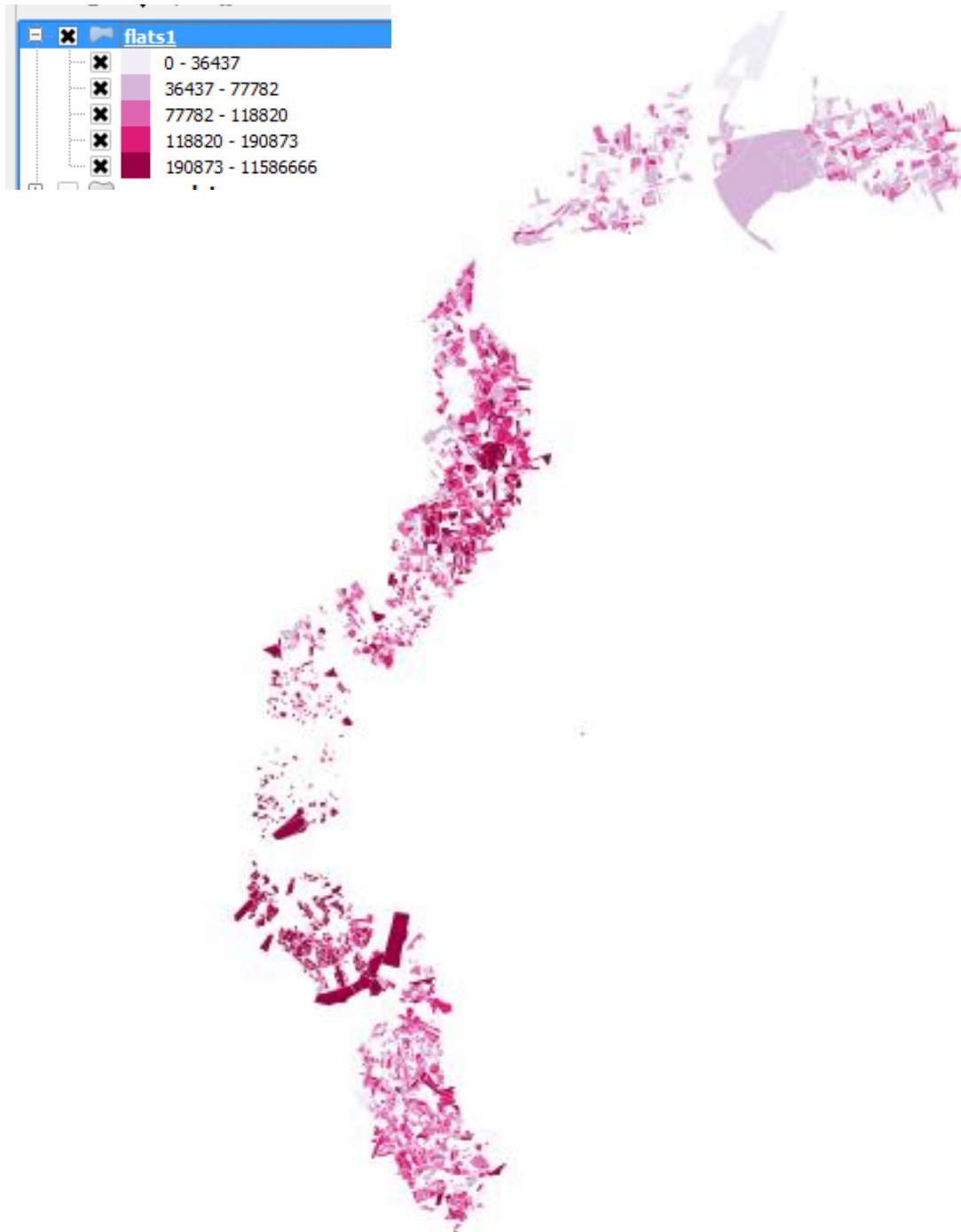**Figure 2:** An example of the standard deviation of flat prices from 2001- 2016 with a 500 metre buffer around each Victoria Line station
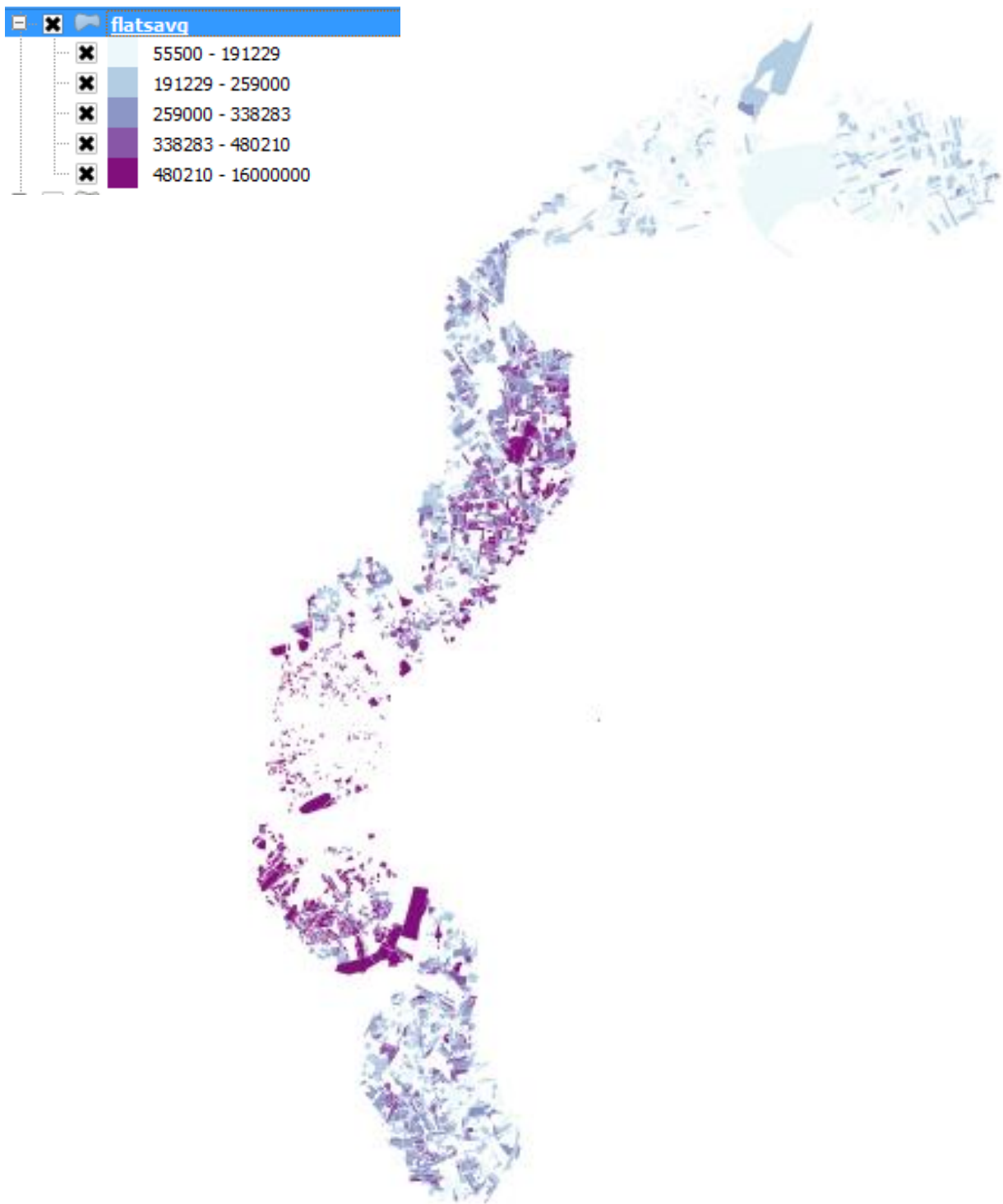
Legend (flatsavg):
- 55500 - 191229
- 191229 - 259000
- 259000 - 338283
- 338283 - 480210
- 480210 - 16000000

Figure 3: An example of the average prices of flats from 2001- 2006 with a 750 metre buffer around each Victoria Line station

2.2 Visualisation

The visualisation element of this research will take inspiration from Oliver O'Brien's (2016) work, see Figure 4, on the London Underground. As Figure 4 shows, O'Brien's (2016) work provides a visual entry point to understand the complexities of the London tube network, this image showing the varying volumes of people using the London Underground throughout the day (City Lab, 2016).
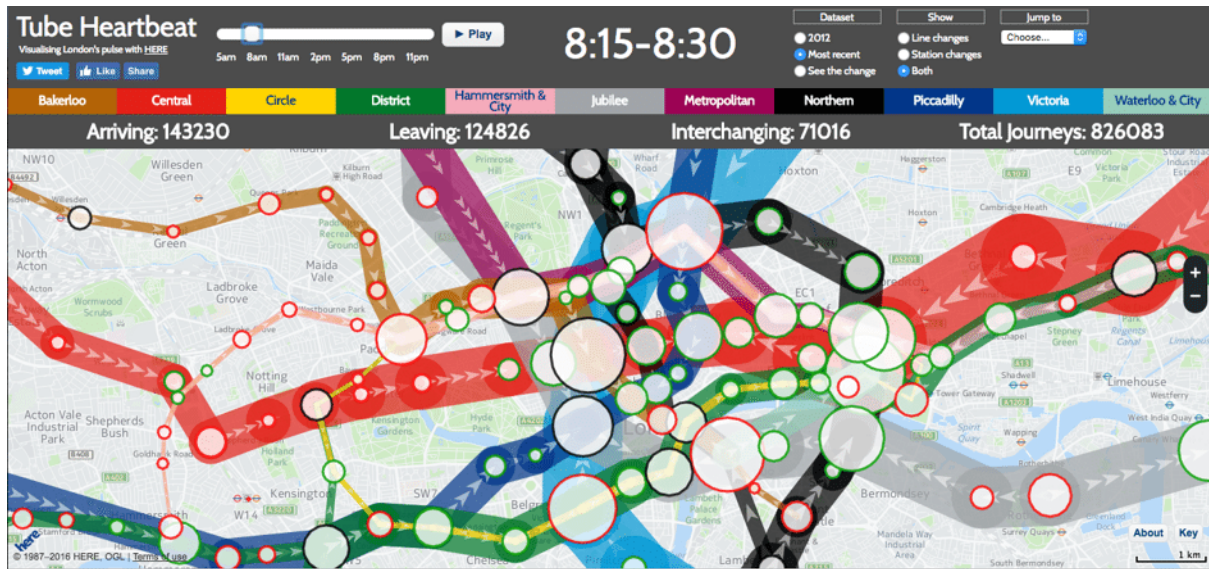

Figure 4: O'Brien's (2016) digitalised map showing the changing volume of people on the tube network throughout the day

This work will therefore aim to build on O'Brien's (2016) work, using Processing3 to demonstrate the changing dynamics of London's population as a result of gentrification. To do this, Florida's (2002) thesis on the 'Creative Class' and his ideas of a Talent and Inequality Index will be used to generate indices for both 2001 and 2011 Census Data. The Talent Index refers to the number of people with a Level four qualification, degree-level classification or above, and the Inequality index relates to the number of people employed in 'Creative' occupations (Florida, 2002). To gather what constitutes a 'Creative' occupation, this work has used both the Standard Industrial Classification of economic activities (SIC) (2007) and the Central Statistical Office's (1992) Standard Industrial Classification of economic activities 1992 which relate to occupations at the time of both the 2001 and 2011 United Kingdom Censuses. The last method that will be used to investigate how gentrification has shaped social inequality are interviews.

2.3 Interviews

The last method in this research, semi-structured interviews, will use Natural Language Processing to decipher what community stakeholders feel are the biggest issues facing them in regards to gentrification (Chowdhury, 2003). Natural Language Processing first lemmatizes the word that has been spoken and then tests for its frequency, producing a table in which each word and the frequency it was spoken is produced (Chowdhury, 2003).. This can then be inputted into word generation software such as Wordle (2016), an example is shown in Figure 5, to produce a visual representation of the common themes discussed within the interviews, forming the basis for subsequent analysis.

Figure 5: Wordle (2016) representation of the most common words discussed during interviews

3. Conclusion

As Figures 2, 3, 4 and 5 show, this research has great potential to visually investigate how gentrification has shaped social inequality across the Victoria Line. It will do this by studying changing house prices, demographics and community priorities via three different methods: GIS, visualisation and semi-structured interviews. Using visual methods will enable this research to be engaging, whilst providing in-depth analysis of the changing trends gentrification is causing across London. Having the Victoria Line as a transect also provides a novel lens to investigate the changing social composition of London. Moreover, by incorporating current research in the form of Florida's (2002) 'Creative Class' this research will recognise that gentrification is a constantly evolving process and one which is becoming increasingly entrenched amongst the landscape of London.

Biography

The author is a final-year undergraduate student of BA(Hons) Geography at the University of Manchester. They are interested in the impact London-based gentrification is having on existing residents.

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