The Emotions of London

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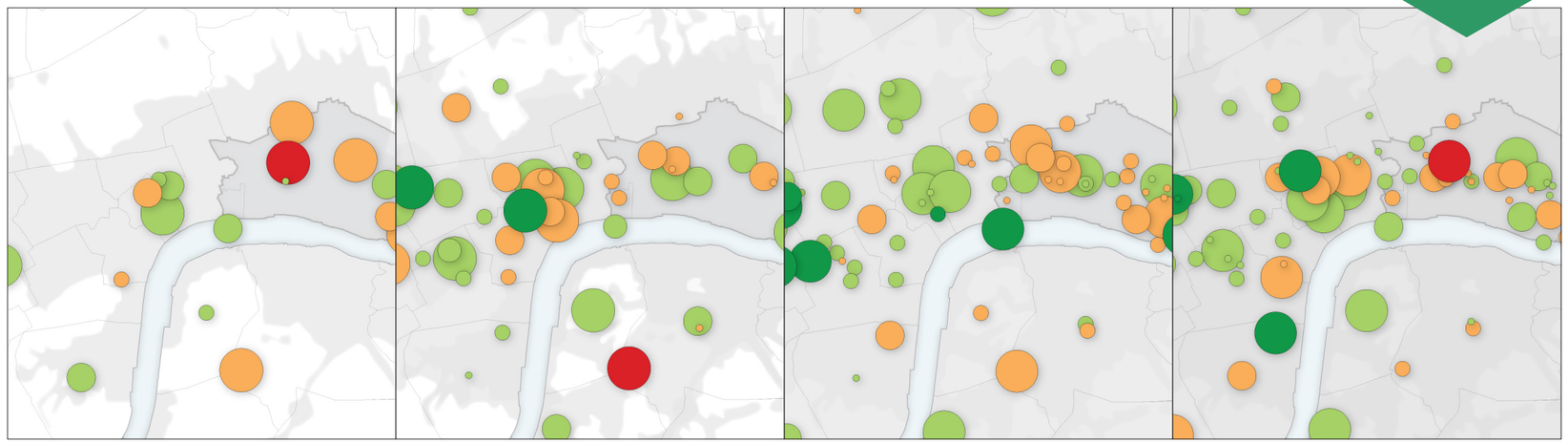

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1. "Ortgebunden"

A few years ago, a group formed by Ben Allen, Cameron Blevins, Ryan Heuser, and Matt Jockers decided to use topic modeling to extract geographical information from nineteenth-century novels.[1] Though the study was eventually abandoned, it had revealed that London-related topics had become significantly more frequent in the course of the century, and when some of us were later asked to design a crowdsourcing experiment, we decided to add a further dimension to those early findings, and see whether London place-names could become the cornerstone for an emotional geography of the city.

In the *Atlas of the European Novel*, Moretti had already worked on the geography of London, mapping residences in Dickens and crimes in Conan Doyle. But emotions have a more elusive reality than buildings or murders, and only one of the *Atlas'* hundred images – a map of foreign ideas in Russian novels – was somewhat comparable to the current project. To further complicate matters, when Moretti had shown that image to Serge Bonin, the historical geographer who was advising him about the *Atlas,* Bonin had been extremely critical: ideas like "materialism" or "equality" were not *ortgebunden,* as German geographers would say: they didn't have that intrinsic connection to a specific place which is the basis of every real map. And if ideas were not mappable, how could emotions be?

Then, we encountered a passage in Philip Fisher's *Vehement Passions:*

> Each citizen [...] has a specific cluster of dangers of which she is constantly or intermittently in fear. Each person will localize the general anticipatory fear in a personal geography of fear [...] We now live in a new geography of fear [...] It is the passion of fear, above all, that isolates the element of suddenness and the part it plays within the passions.[2]

Even more than the "geography of fear", it was Fisher's remark on the "suddenness" of this emotion that we found illuminating. What is sudden occurs at a specific moment in time, and hence also *at a specific point in space*: it is definitely *ortgebunden*, to return to that notion. And if this is so, then a geography of emotions – their actual distribution over a map – becomes imaginable. A London of fear, joy, anger, hopefulness...

1 In addition to those mentioned here, a number of other people contributed to this project throughout its lifespan – particularly Van Tran and Annalise Lockhart, undergraduate research assistants without whose wide-ranging work and intellectual engagement this pamphlet would not have been possible.

2 Philip Fisher, *The Vehement Passions*, Princeton UP 2002, p. 110, 117-8.

Figure 2.1 Geographic place-names as a percentage of the words in our corpus

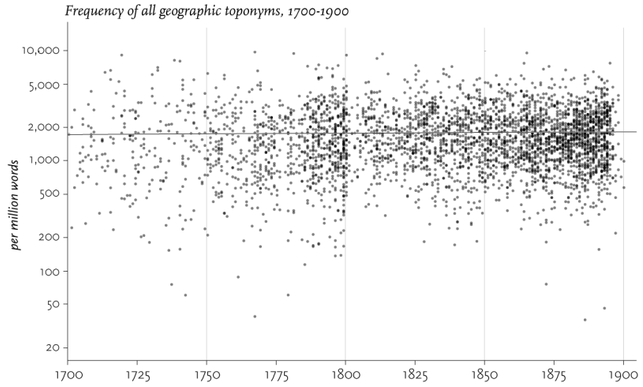
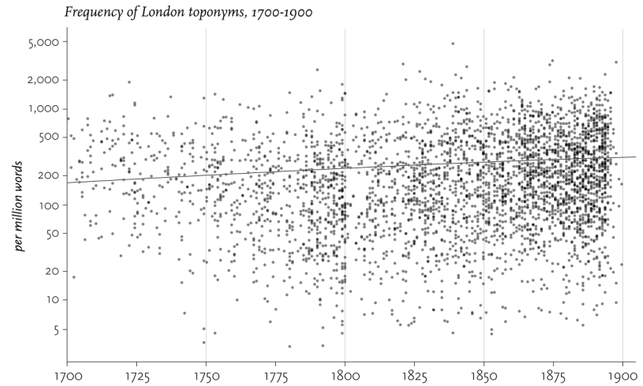


Figure 2.2 London place-names as a percentage of the words in our corpus



Figures 2.1 and 2.2 These charts – in which each dot represents an individual novel – update (and fully confirm) the findings from a few years ago, using a corpus of about 5,000 English novels published between 1700 and 1900: 304 for the period 1700-49, 1,079 for 1750-99, 1,290 for 1800-49, and 2,189 for 1850-99. The values on the y-axis are logarithmic (to include texts that have as few as 5 or as many as 5,000 toponyms), and make the historical trend appear less dramatic than it actually was; in fact, the frequency of London toponyms almost doubled in a century – increasing from a median of 102 in 1780-1800 to one of 190 in 1880-1900 – whereas that of geographical toponyms in general (in Figure 2.1) remained fundamentally flat.

Figure 2.3 A London place-name and its narrative context.

He would go through it, always armed, without a sign of shrinking. It had to be done, and he would do it.

At ten he walked down to the central committee-room at Whitehall Place. He thought that he would face the world better by walking than if he were taken in his own brougham. He gave orders that the carriage should be at the committee-room at eleven, and wait an hour for him if he was not there. He went along Bond Street and Piccadilly,

*****Regent Street*****

and through Pall Mall to Charing Cross, with the blandly triumphant smile of a man who had successfully entertained the great guest of the day. As he got near the club he met two or three men whom he knew, and bowed to them. They returned his bow graciously enough, but not one of them stopped to speak to him. Of one he knew that he would have stopped, had it not been for the rumour. Even after the man had passed on he was careful to show no displeasure on his face. He would take it all as it would come and still be the blandly triumphant Merchant Prince,—as long as the police would allow him.

—Anthony Trollope, *The Way We Live Now*

2. Corpus, Units, Programs

In programming the study, Heuser began by identifying all proper names in the corpus via a Named Entity Recognition program, later removing from the list those terms which had nothing to do with London, like foreign toponyms, characters' names, and the like. The results are shown in **Figures 2.1-2.**[3]

The 382 London locations that had received at least 10 mentions formed the basis of our second corpus: about 15,000 passages which – in a version of the keywords-in-context approach – included a specific place-name at the center, plus the hundred words that preceded and followed it, as in the case of "Regent Street" in **Figure 2.3.**[4] Taggers were then asked to read the 200-word passage, and identify the emotion that best characterized it.

At first, we were hoping to capture a wide spectrum of emotional attitudes; but the lack of agreement among the taggers – as well as among the English graduate students who offered to act as a control group – convinced us to reduce the options to the opposite extremes of fear and happiness.[5] As a further constraint, a passage would count as "frightening" or "happy" only if at least half of the taggers had identified it as such; and Mark Algee-Hewitt re-ran all passages through a "sentiment analysis" program.[6] And, eventually, some patterns began to emerge. But before coming to them, we need to sketch out the main material transformations of eighteenth- and nineteenth-century London.

3. Real London, Fictional London

In the period covered by our study, London changed like never before. Its population grew from around 600,000 in 1700 to 1,1000,000 in 1800 and then, more dramatically, to 4,500,000 (or 6,500,000, depending on the criteria) in 1900. The nineteenth century, when most of the demographic leap occurred, was also decisive in the redefinition of the space – and in fact of the very *shape* – of the city. Steiner's sequence of London maps in **Figure 3.1** clearly shows how – up to the first quarter of the nineteenth century – the fundamental urban axis ran horizontally from East to West on

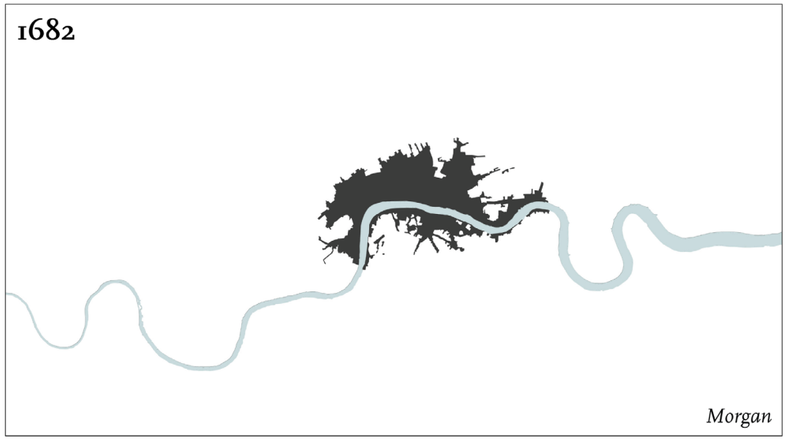
3 The composition of the corpus for this study was as follows: for the eighteenth-century, it included texts marked as fiction by the English Short Title Catalogue, with additional texts coming from the Literary Lab's "Eighteenth-Century Fictional Marketplace" project; nineteenth-century texts came from the Chadwyck-Healey database, as well as from a collection released on the Internet Archive by the University of Illinois https://archive.org/details/19thcennov; a handful of additional texts came from the Gutenberg project, Google Books, or Stanford library scans. We only used novels whose Optical Character Recognition accuracy rate was above 90%.

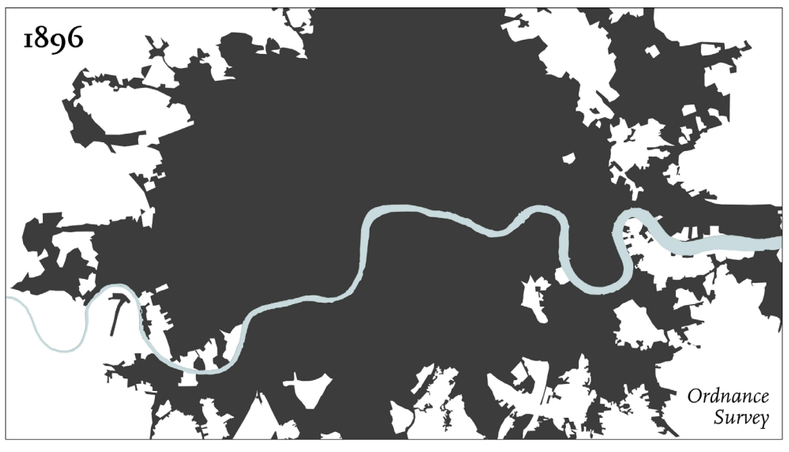
4 In the conclusions, we will discuss the specific narrative functions that crystallize around place-names. For now, we treat all geographical information as a single system.

5 The initial stages of the research are described in detail in Mark Algee-Hewitt, Ryan Heuser, Annalise Lockhart, Erik Steiner, and Van Tran, "Mapping the Emotions of London in Fiction, 1700-1900: A Crowdsourcing Experiment", *Literary Mapping in the Digital Age*, David Cooper, Chris Donaldson, and Patricia Murrieta-Flores, eds, Ashgate 2016.

6 Sentiment analysis is a text-mining technique which evaluates texts via a dictionary of terms organized around a "polarity" of negative and positive values. The process is a little more complicated than simply adding up the terms that belong to one or the other category, but, essentially, that is the basic mechanism. Clearly, everything hinges on the words that are included in the dictionary; the program we used, which was developed in the Stanford Linguistics department, has about 1,700 negative terms, and 1,300 positive ones; since its training corpus is the *Wall Street Journal* (and similar sources), its understanding of emotions in eighteenth- and nineteenth-century texts is not impeccable.

Figure 3.1 The growth of London, 1682-1896





the left bank of the Thames, creating a strangely elongated rectangle.[7] It was only in Victorian times that London detached itself from the river, using major roads as so many tendrils to expand towards the North and the South, and eventually transforming its initial shape into the circular pattern so typical of urban geography.

As nineteenth-century London had changed so much, and so quickly, we expected more or less the same from its fictional representation. But here, the only transformation occurred in the second half of the eighteenth century, when the West End became as narratively populated as the City (**Figure 3.2**); afterwards, hardly anything changed. The number of geographical references kept increasing, yes, but they remained essentially localized in the City and in the West End: the rest of London – *where most of the growth was actually taking place* – never really mattered. This drastic discrepancy between fact and fiction is synthesized in **Figure 3.3**, where the horizontal axis represents the population of the various boroughs, and the vertical one their presence in fiction. Along the diagonal line, a borough's fictional presence corresponds exactly to its real population: it's the case of the City in the 1800s, Islington in the 1810s, Camden in the 1890s, and Kensington-and-Chelsea for much of the century. But the overall message of the chart lies in the clear, and in fact growing *divarication* between fiction and reality: with the dramatic over-representation of Westminster and the City on one side of the diagonal, and *under*-representation of Tower Hamlets, Southwark, and Hackney on the opposite one. Though we commonly speak of "London novels", then, this image reveals how *partial* the representation of the city actually was – and **Figure 3.4** further extends this line of inquiry by showing the favorite spaces of a few particularly well-known London novelists.

Figure 3.2 The stability of fictional London, 1700-1900

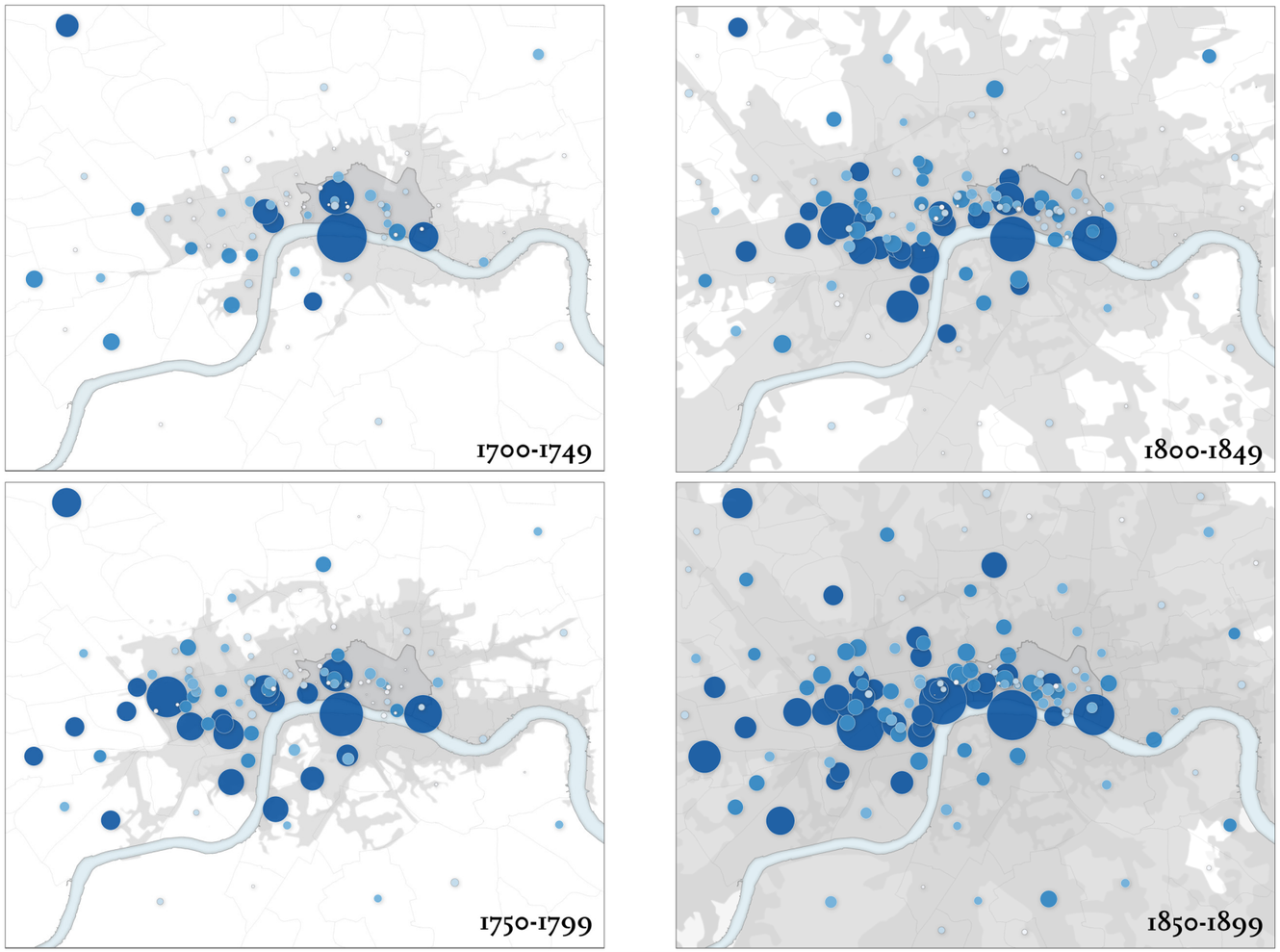
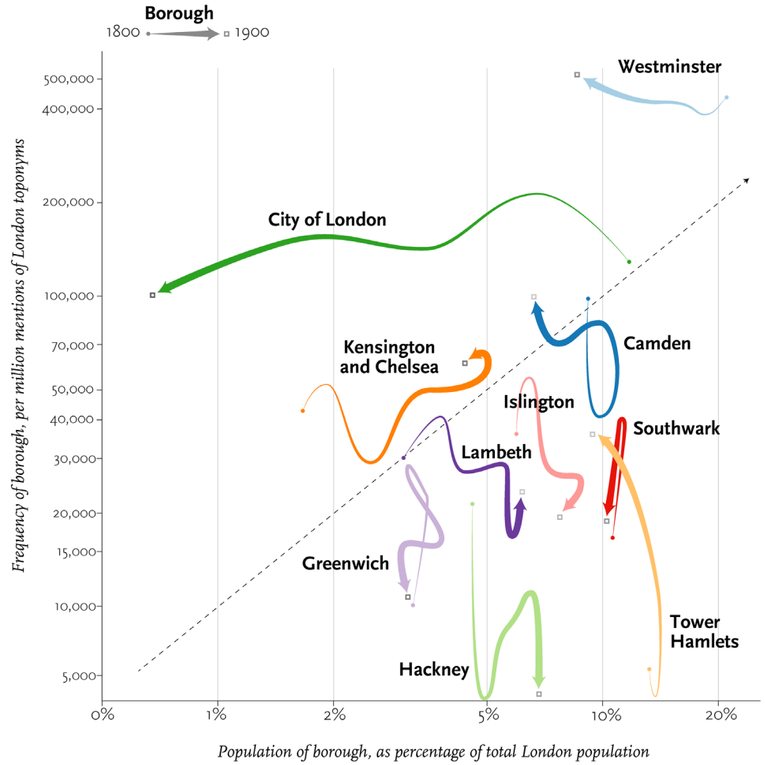


Figure 3.3 London's real and fictional population, 1800-1900

In this image, each borough is represented by a differently colored line, which becomes thicker with each passing decade, so as to make the direction of the process immediately visible: in the case of Westminster and the City, for instance, fictional over-representation kept clearly increasing as the century advanced. (For the City, this has probably a lot to do with the fact that its residential population – as opposed to working commuters – shrank drastically during the nineteenth century.) Source: Historical Census Population from Greater London Authority http://data.london.gov.uk/dataset/historic-census-population



7 As often happens with such shapes, it became easy to see the city as dominated by a binary polarity, which in the case of London took the form of an opposition between West End and City (and, later, of West and East End). Here is a narrative version of this state of affairs, from a conversation taking place in Mayfair:
"I think I have heard you say that their uncle is an attorney in Meryton"
"Yes; and they have another, who lives somewhere near Cheapside."
"That is capital," added her sister, and they both laughed heartily. (Jane Austen, *Pride and Prejudice*).

Figure 3.4 "London" novelists?

This chart indicates in what area of London an author's geographical references are usually placed: the West End, for instance, scores almost 80% for silver-fork author Catherine Gore (with Trollope not far behind), while the City, being the oldest part of London, is inevitably the chosen domain of eighteenth-century writers (Fielding and Defoe), and of a master of Newgate fiction like W.H. Ainsworth. The only writer to pay consistent attention to the East End is Walter Besant (though his famous 1882 Stepney Green novel, *All Sorts and Conditions of Men,* had its protagonists involved in sub-plots in the West End). The chart also explains why Dickens is so often seen as the "real" London novelist: unlike others, he was equally interested in several parts of London (though not really in the East End), and his adoption of the multi-plot narrative structure allowed him to both pay attention to different areas, and turn this mosaic of little worlds into an organized whole.

4. The Semantics of Space

First finding of this research: in the course of the nineteenth century, real London radically changed – and fictional London hardly at all. In France, Zola's Paris was very different from Balzac's only thirty years earlier; in London, Sherlock Holmes' *fin-de-siècle* investigations still focused on the City and the West End, as they could have done a century earlier. Why? Where did this incredible stability come from?

Probably, from two different sources. In the case of the City, the stability may be actually more apparent than real, as "the" City, though grammatically singular, had long consisted of a plurality of heterogeneous spaces. "The inhabitants of [...] Cheapside", Addison had written as early as 1712, are "removed from those of the Temple on the one hand and those of Smithfield on the other by several climates and degrees in their way of thinking and conversing." Several climates ... in half a mile! And the same could be said of the old Bailey and St Paul's, the Bank and Newgate, the Pool of London (the city's main port, before the expansion of the Docks) and the hospital of St Bart's (where doctor John Watson will have his first encounter with Sherlock Holmes). Finance, long-distance trade, the law, local markets, incarceration, publishing, religion, medicine... The City's enduring fictional presence was fundamentally due to the fact that each of these worlds-within-a-world could turn into the fictional habitat of a different writer (or genre): gothic and historical fiction focused on the Tower, which lay just east of its wall (**Figures 4.1-2**); Newgate novels on the jail, and on the old Bailey that was adjacent to it (**Figure 4.3**); Harriet Martineau, a little atypically, on the economic hub around the Bank (**Figure 4.4**); while the interplay of publishing, the law, and finance became typical of the mid-Victorian generation of Dickens and Thackeray (**Figure 4.5-6**).

If the City's fictional presence is due to the heterogeneity of its components, that of the West End arises from the opposite mechanism: its being an extremely *homogeneous* space, where "the great Georgian estates remained (with their clones, such as Belgravia and Kensington) the chic places to live, shop, saunter, and dine".[8] Eighteenth-century addresses that are still in fashion at the end of the industrial century: in other Western metropolises, where the new elites created their own enclaves in the Chaussée d'Antin, the Upper East Side, or the Grunewald, this would be unthinkable. In London, though, the West End was never really challenged – only somewhat enlarged (north of Oxford street, west of St. James, south of Hyde Park), to allow for the osmosis of the old and new ruling class. In an instance of what we could call *the semantics of space*, passages located in the West End acquired in the course of this process an unmistakable class flavour: a lexicon which combines the opulence of "square", "park", and "gardens", the patrician ring of "earl" and "Edward", and the sharp tone of mastery of "servants", "ordered", and "desired"; in a more indirect vein, we find the rituals of polite sociability ("acquaintance", "conversation", "visit", "meeting", "obliged", "aunt", and the inevitable "marriage"), where even adjectives and adverbs sound prudent and calculating ("hardly", "grave", "usual", "particular", "really").[9] Final touch, "her": a sign of women's ambiguous centrality within this social space, at once dominant ("her", not "him") and dominated: not emerging as a (grammatical) subject, but as the object of other people's desires, plans, and actions ("proceeded to inform her", "after pacifying her", "freely offered her", "never forgave her"); or else, when "her" functions as a possessive determiner, as someone observed from the outside, with an ever-watchful attention that takes in, at times within a single sentence, material possessions ("her carriage", "her ladyship's dressing-table"), physical appearance ("her silk dress", "her veil"), behavior ("her loftiness of mien", "her

8 Roy Porter, *London. A Social History*, Harvard UP 1995, p. 96.

9 These results are based on the "most distinctive words" approach described in detail in Sarah Allison, Marissa Gemma, Ryan Heuser, Franco Moretti, Amir Tevel, and Irena Yamboliev, "Style at the Scale of the Sentence", Literary Lab Pamphlet 5, 2013, pp. 10ff. Basically, words are considered "distinctive" of a given part of a corpus – here, of passages located in the West End – when they occur there more frequently than in the corpus as a whole.

Figure 4.1 Gothic Novels

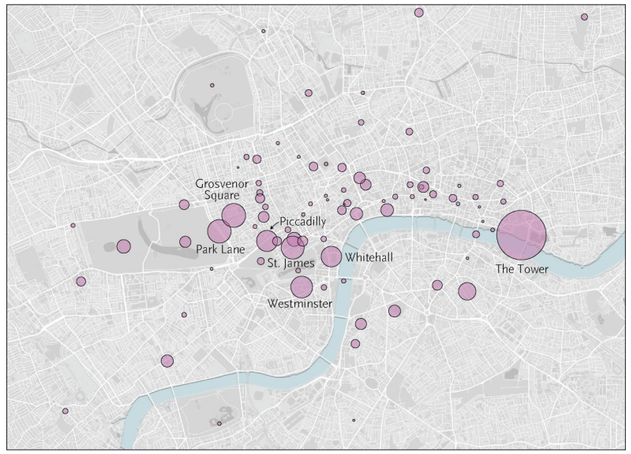
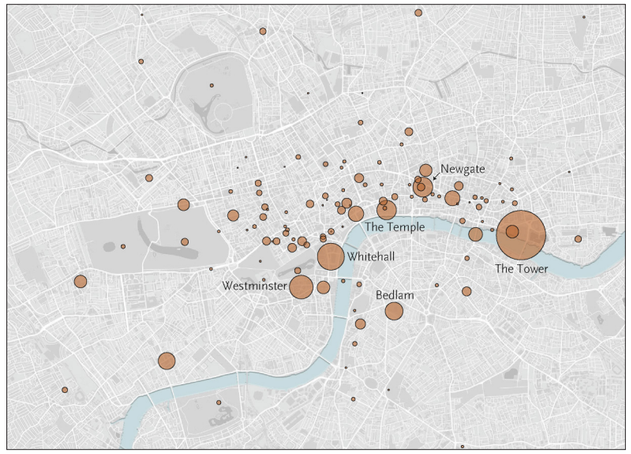
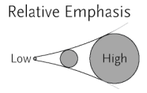


Figure 4.2 Historical Novels





Note: "Relative emphasis" is a measure of the proportional use of a specifc toponym relative to all London toponyms used in that category or by that author. We use a uniform scale for all maps in order to give a general impression of the geographical focus of each.

Figures 4.1-6 The City and its novels

In the course of the nineteenth century, English novelists used the City and its vicinity for a variety of different purposes, though a clear shift occurred from the earlier, sinister world of crime and punishment (**Figures 4.1-3**), to the more prosaic interactions of the modern professions (**Figures 4.4-6**).

Figure 4.3 Newgate Novels

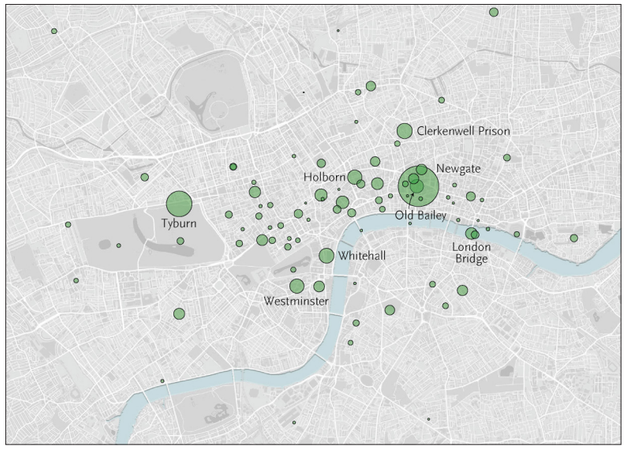


Figure 4.4 Martineau

Relative Emphasis

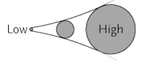


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Figure 4.5 Dickens

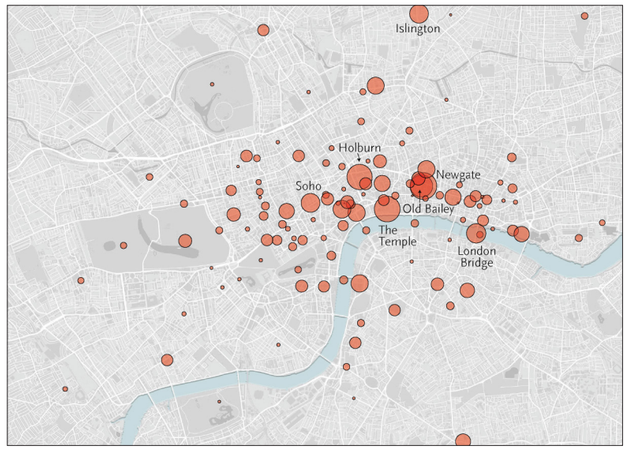


Figure 4.6 Thackeray

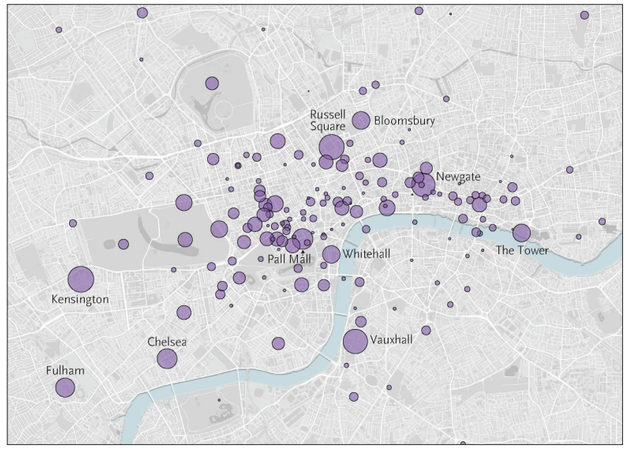
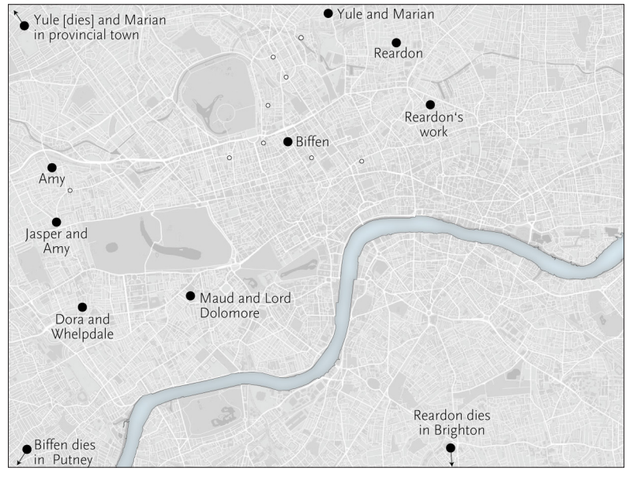


Figure 4.7

Figure 4.8



Figures 4.7-8 The new/old geography of New Grub Street

Just as Figure 3.2 had outlined the social *"langue"* of London novels, *New Grub Street* is an instance of individual *"parole"*, that begins by challenging the existing matrix, but eventually surrenders to it.

playful manner"), and social relations ("her selfish husband", "her friends", "her father's wealth").[10]

The enduring force of attraction of the West End is still visible, at the end of the century, in Gissing's *New Grub Street* (1891). Focused on the new intellectual middle-classes of North London, the initial geography of the novel stretches from the British Museum to Camden Town (**Figure 4.7**), thus remaining completely extraneous to the old east-west axis; as the story proceeds, however, this new geography disintegrates, as successful characters systematically relocate to West End addresses, whereas those who "fail" are scattered to the four winds: Biffen takes an interminable walk to commit suicide on Putney Hill; Reardon moves to Islington, works on the City Road, and dies in Brighton; Yule moves to, and then dies in an unspecified "provincial town", where Marian also ends up (**Figure 4.8**).

10 The overrepresentation of "her" thus signals the affinity between the English upper class and the symbolic form of the marriage plot, in its various metamorphoses. With its plurality of genres, illustrated in Figures 4.1-6, the City's semantics is inevitably far less homogeneous: it includes terms that evoke threat ("death", "crowd", and "dark"), indications of movement ("proceeded", "against", "front", "through"), and snapshots of the urban transport system ("river", "horse", "train", "boat"). Interestingly, both "England" and "king" are among the City's most distinctive words: possibly a sign of its acting as a symbol for the nation as a whole, in contrast to the exclusivity of "earl", "park", and "servants".

5. The Emotions of London?

London's historical expansion, and its fictional stability; the social mosaic of the City, and the homogeneity of the West End; *New Grub Street*, and the inflexibility of the old geography. And emotions? Where is the "geography of fear" promised in our opening section?

Figure 5.1 offers a first answer: the greener the color (Harley Street, St. James Square, Hyde Park, Belgrave Square), the happier the passages occurring near that location; the redder the color – as at Newgate, Bedlam, or the Pool of London – the more fright-

ening the passages; while light green and light orange indicate locations in which neither emotion is truly active.[11]

We will return to the association of the West End with happiness, and of (parts of) the City with fear. The most striking result of this map, though, *was that so many passages turned out to be neither happy nor frightening*. **Figure 5.2** highlights this fact by reorganizing the data, not in terms of fear *versus* happiness, but of "emotional neutrality" *versus* "emotional intensity": white indicates that emotions are absent; the two shades of light purple, that they are weak; while only in the dark purple areas is an emotional "signature" genuinely present. And the verdict is clear: ours was less a map of the emotions of London than *of their absence*. This emerged with equal clarity from both crowd-sourcing and sentiment analysis: though human taggers and computer program disagreed about specific emotions – for the taggers, 21% of the passages were happy and 12% frightening, while the program, more intrepid, came up with 21% and 1% – they *did* agree that the large majority of passages was emotionally neutral: 67% according to crowd-sourcing, and 78% to sentiment analysis (**Figure 5.3**).

A map dominated by emotional neutrality. Did this mean that London novels avoided emotions? Not quite (though one *does* wonder what Paris novels would show). Remember: the passages on which our maps were based included the 200 words around a place-name – and place-names, as a rule, are part of the public realm. More than the emotions "of London", then, we had been measuring the emotions *of London's public spaces*: and if so, then the neutrality so conspicuous in **Figure 5.2** had perhaps less to do with the absence of emotions from novels, than with their silencing *in the public dimension*. To test this hypothesis, we took a sample of 200-words passages *not* including place names, and asked the taggers to evaluate them. The histogram in **Figure 5.4** shows the results: if in the presence of place names, as we know from **Figure 5.3**, fear had emerged in 12% of the cases, and happiness in 21%, in their absence the frequency rose to 25% and 34%. Or in other words: *when novels moved away from public geography, their emotional intensity dramatically increased*.

Now, the muting of emotions in public had long been known to the sociology of bourgeois existence: from the "neutrality" of nineteenth-century male fashion[12], to Simmel's "blasé type" – who "experiences all things as being of an equally dull and grey hue"[13] – and the "unfocused interaction" of Goffman's *Behavior in Public Places*. Our data clearly corroborated all this. But with a marked temporal discrepancy: Sennett's "neutrality" – as well as Holst Katsma's "neutralization" of novelistic loudness – had crystallized around the middle of the nineteenth century;[14] Simmel's "grey hue" had emerged during the *fin-de-siècle*, and Goffman's "unfocused interaction" even later. According to our findings, however, emotions in public had already been neutralized *in the eighteenth century*, and little seemed to have changed between 1700 and 1900 (**Figure 5.5**).

Interesting, when quantitative findings contradict previous research. Had we discovered in the eighteenth century a reason for the muting of emotions as strong as those associated with later periods, we would have trusted our results. *Not* having found anything of the sort, we still present them, but accompanied by a good dose of skepticism. In the next section, it will become clear why.

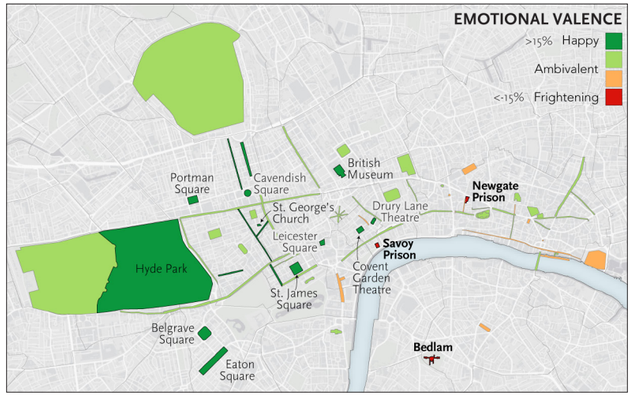


Figure 5.1 The emotions of London, 1700-1900

In this image, green is particularly prevalent in squares (the term that was also the most distinctive of the West End's lexicon), whereas passages where fear dominates are most often located in spaces of coercion and internment.

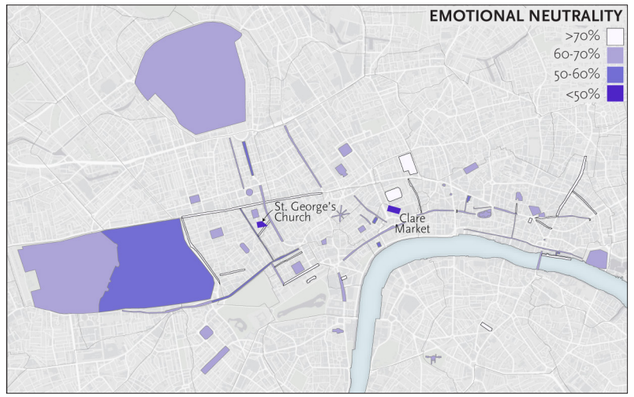


Figure 5.2 Neutrality in London, 1700-1900

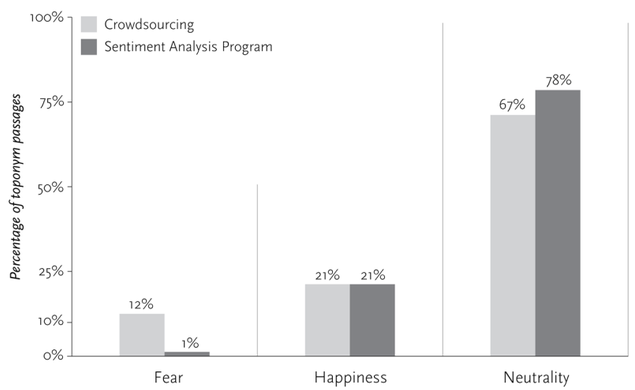


Figure 5.3 Fear, happiness, neutrality

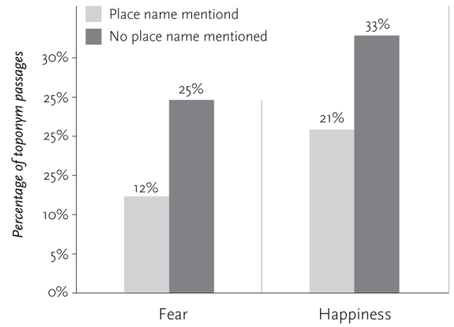


Figure 5.4 Emotions in public, emotions in private

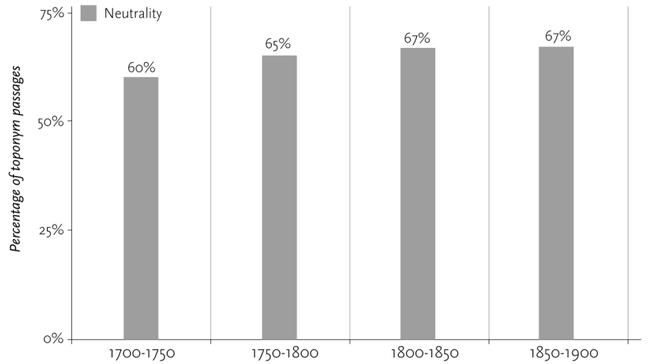


Figure 5.5 The neutralization of emotions in public, 1700-1900

Although this chart shows an increase in neutrality from 60% in the first half of the eighteenth century to 67% in the nineteenth, the transformation is much more modest than previous research would suggest.

11 The results were obtained by asking ten taggers whether a given passage was associated to fear or not, and a different group of ten whether it was associated to happiness or not; the passage would count as frightening, or happy, if at least five out of the ten taggers said so; otherwise, the passage would count as "neither".

12 "As numerous writers comment, [the clothing of the 1840s] was the beginning of a *style* of dressing in which neutrality – that is, not standing out from others – was the immediate statement." Richard Sennett, *The Fall of Public Man*, Cambridge UP, 1977, p. 161.

13 Georg Simmel, *The Philosophy of Money*, revised ed. [1907], Routledge, London-NY 1990, p. 256.

14 See Holst Katsma, "Loudness in the Novel", Literary Lab Pamphlet 7, 2014. In *Tempus* (1964), Harald Weinrich had already identified the mid-nineteenth-century as the moment when the narrative foreground, with its intense emotions, had started to lose ground *vis-à-vis* the background, by definition much more sedate. His intuition was fully confirmed by a quantitative investigation conducted a few years ago at the Literary Lab: the past progressive – the typical tense of the background in English, roughly corresponding to the French *imparfait* – rises from 6 occurrences per 10,000 words early in the nineteenth century, to 11 in mid-century, and 16 at the end.

6. The Emotions of London

Figure 5.1 offered a synthetic overview of London's emotional temperature between 1700 and 1900; Figure 6.1 breaks the data down into four distinct half centuries.

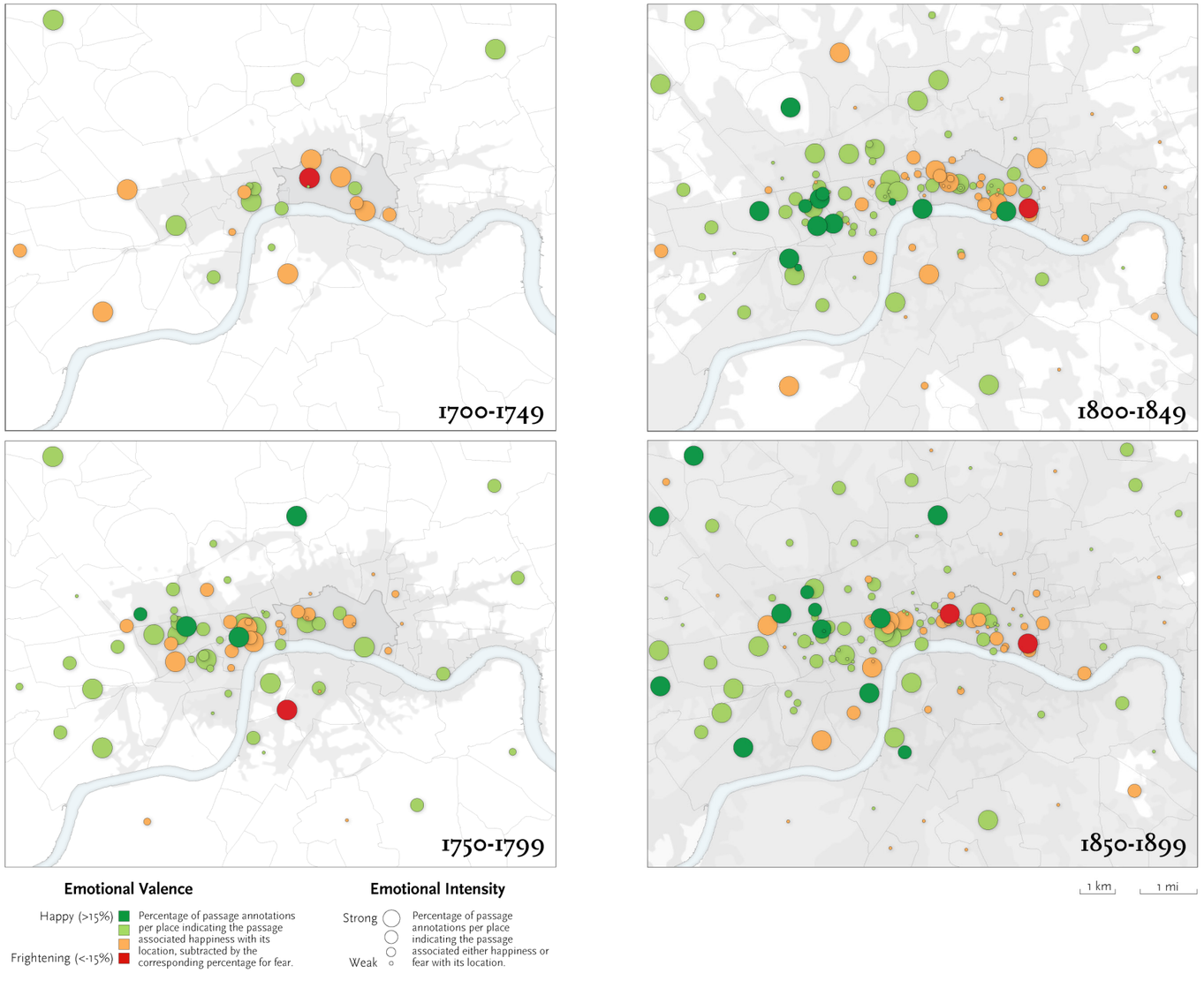
In the first fifty years, the fear associated with Newgate, Tyburn, Bedlam, the Tower and the Pool of London is clearly the dominant emotion in our corpus. In the following half century though, as the West End makes its appearance in the narrative geography of London, fear seems to undergo a significant decline (Figure 6.2). "Seems to"; because, if there is no doubt that "the overall reduction of fear" , as Fisher puts it, has been "one of the central accomplishments of modern civilization" (116), the key factors he singles out as causing the transformation – "nighttime electrical lighting, insurance policies, police forces" – date to the middle (the police), or even the end of the nineteenth century (electricity and insurance): that is to say, a full hundred years later than what appears in Figure 6.2.

It's another discrepancy between quantitative and qualitative research; this time, though, we think we have found the reason. Here is the *incipit* of a forgotten Victorian novel, William North's *The Impostor* (1847):

> Midnight was at hand, as in a small ill-furnished room, above a low shop, in one of the dirtiest, narrowest, and most ancient looking lanes in the oriental moiety of the English metropolis, were seated two individuals of the most opposite appearance conceivable. The one, an old man of at least three score, exhibited a set of pinched up, calf-skin colored features in which dotage, stupidity, and cunning seemed to struggle for the ascendancy.

"One of the dirtiest, narrowest, and most ancient looking lanes"... We were measuring emotions in the proximity of London place-names – but as this sentence proves, there can be plenty of alarming scenes which include some form of localization, *but without involving any place name at all* (not even "London"!) "A single lamp shed a sickly light on the linked and intersecting lanes (though lane is too lofty a word)" (Bulwer-Lytton, *Pelham,* 1828); "a maze of narrow lanes, choked up

Figure 6.1 The emotions of London, 1700-1900



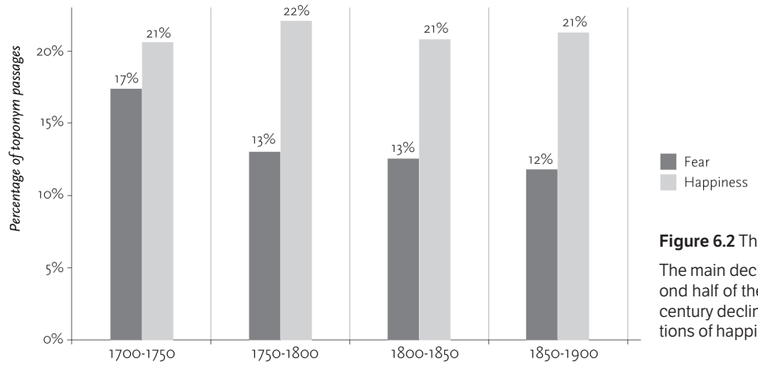


Figure 6.2 The decline of fear, 1700-1900

The main decline of fear, according to our data, occurred between the first and the second half of the eighteenth century, when it dropped from 17.4% to 13%; its nineteenth-century decline (to 12.6% and then 11.8%) seems hardly relevant in comparison. Indications of happiness, for their part, hardly change over the 200-year period.

with dirt, pestiferous with nauseous odours, and swarming with a population…" (Reynolds, *The Mysteries of London*, 1845); "a bleak, dilapidated street" (Dickens, *Bleak House*, 1853). Lane, maze, street – court, row, alley, conduit, passage, byway … As novelists increasingly turn to London as their fictional setting, geographical *reticence* emerges as a key ingredient of narrative fear – and one which a Named Entity Recognition program inevitably misses: Dickens' "bleak and dilapidated street" will *not* be counted as a street in the same way as Oxford Street, and will therefore not appear in our maps and charts (**Figure 6.3**). And so, alongside the old threats associated with Saffron Hill, St, Giles, Shoreditch, Smithfield, and Newgate, a new rhetoric of indirection gives voice to the fact that, to quote Fisher one more time, "after Hume and Adam Smith, the proxy for fear was *uncertainty*" (112). Newgate and Bedlam are terrifying, but their nature is perfectly well-known; "a maze of narrow lanes" evokes unfathomable horrors. "I looked round, but could recognize nothing familiar in the narrow and filthy streets", writes the narrator of *Pelham*, recalling his most frightening adventure: "*even the names of them were to me like an unknown language*".

If the rhetoric of reticence contributed to the (apparent?) decline of fear, the spatial clustering of happiness in the first half of the nineteenth century is for its part the result of a perfectly explicit social geography. Here, as the histogram in **Figure 6.2** shows, quantitative variation plays hardly any role: in absolute terms, "total London happiness" (to use a Benthamite expression) slightly contracts, compared to the previous half century. But it is now so concentrated in the West End, that it almost isolates it from the rest of London. And indeed, these were triumphal decades for the British upper class: victorious on the European battlefield, unique in its world economic power, and implacable with workers at home. The erection of Regent Street (1817-23) was the monumental consecration of this state of affairs; "a boundary and complete separation", wrote its planner and architect, John Nash, "between the Streets and Squares occupied by the Nobility and the Gentry, and the narrow Streets and meaner Houses occupied by mechanics and the trading part of the community."

Perfect. *Too* perfect, perhaps? Is this convergence of wealth and "happiness" a product of nineteenth-century writers – or of twenty-first-century taggers? A sample of 200 passages tagged as happy – half of them taken from the entire period, and the other half from 1800-1850 – suggests that what was routinely recognized as "happiness" (more often by the "sentiment analysis" program trained on the *Wall Street Journal* than by human taggers, in fact) had indeed more to do with social well-being than with a specific type of emotion. This said, a comparison of the two sets of passages also showed that the nineteenth century had introduced some major changes in the affective tonality of such "well-being". The widespread "benevolence" of the previous century, for instance, with its strong inter-generational axis (from a parent, or an older mentor, to a child or ward), was replaced by the horizontal "affection" between young persons of the same age: lovers, of course, but also friends, siblings (especially sisters), and cousins. Even more dramatic was the

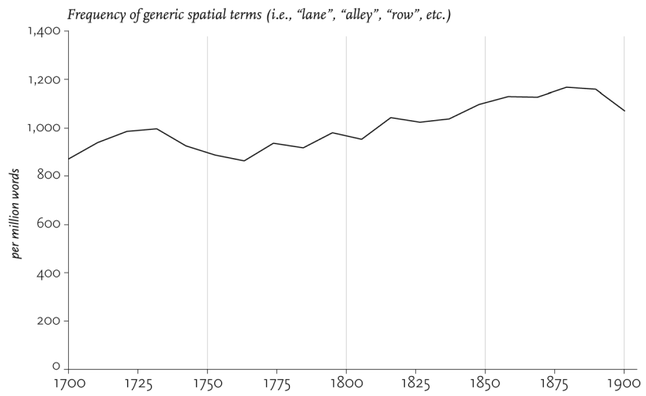


Figure 6.3 "A maze of narrow lanes"

This chart shows the frequency per million words of "alley", "alleyway", "artery", "back alley", "back street", "byway", "conduit", "dead end", "drive", "lane", "passage", "passageway", "path", "place", "row", "thoroughfare", and "walk". As can be seen, the presence of this group of terms increases regularly – from just over 800 to almost 1,200 – between the mid-eighteenth and the late nineteenth century. (The list does not include "court", which refers much more often to the British monarchy than to the London equivalents of the *Cour des Miracles*.)

contraction of the "pleasure" cluster, which used to range from the delight in scenery and people to the enjoyment of food, drink, and loud (and vulgar) amusement. In the early nineteenth century, this pursuit of immediate satisfaction was both transmuted into a more sedate "worldliness", and spatially relocated: if "pleasure" could be found just about everywhere, "affection" and "worldliness" were now strictly concentrated in the West End. As has often been the case in history, the "refinement" of a ruling-class culture entailed its withdrawal into an exclusive enclave, where the semantics of space would coincide more and more with the semantics of class.

With the association of fear with a geography of the unknown, and of "happiness" with upper-class well-being, our research had reached a natural, if somewhat oblique, conclusion. And as the project was winding down, a long discussion with Matthew Wilkens – who had come to the Literary Lab to present his work on space in American literature – prompted us to a final, critical re-examination of the very idea of "narrative geography".

7. Conclusion. On the Concept of "Narrative Geography"

So far, we have assumed that, when topographical indications appear in a novel, they play always more or less the same role. Our discussion with Wilkens made us reconsider this idea, and we decided to extract a sample of 200 passages to see how exactly place-names functioned within a story. Nearly half of the cases were perfectly straightforward: they indicated the setting of the ongoing action. Here are a few examples:

> And as soon as the stage in which he traveled reached ***Westminster Bridge***, he got into an hackney-coach, and ordered it to be driven to the house of Mr. Woodford.
>
> Shortly after they had gone away for the first time, one of the scouts came running in with the news that they had stopped before Lord Mansfield's house in ***Bloomsbury square***.
>
> Past Battersea Park, over Chelsea Bridge, then the weary stretch to Victoria Station, and the upward labor to ***Charing Cross***. Five miles, at least, measured by pavement. But Virginia walked quickly…
>
> He was conducted first before the Privy Council, and afterwards to the Horse Guards, and then was taken by way of ***Westminster Bridge***, and back over London Bridge -for the purpose of avoiding the main streets-, to the Tower, under the strongest guard ever known to enter its gates with a single prisoner.

A character "taken by way of Westminster Bridge, and back over London Bridge": exactly the kind of direct information we had half-unconsciously expected to find. But this was not the whole story. In about one-fourth of the cases, place names turned out to indicate, not the setting of the current action, but events that had occurred in the past (as in the first two passages below), or were expected to occur in the near future (third and fourth passage):

> They were married at ***the Savoy***, and my grandfather dying very soon, Harry Barry, Esquire, took possession of his paternal property and supported our illustrious name with credit in London.
>
> Whereas a young boy, named Oliver Twist, absconded, or was enticed, on Thursday evening last, from his home at ***Pentonville***, and has not since been heard of…
>
> Though I should accompany you tomorrow, Madam,' said she, `I shall have time sufficient for my walk to ***Norwood***. The preparations for my journey cannot occupy an hour…
>
> The letter of which he had spoken reached Monica's hands next morning. It was a very respectful invitation to accompany the writer on a drive in ***Surrey***.

Around this basic asymmetry – present *versus* past/future – other differences crystallized. Current action was usually conveyed by an impersonal third-person narrator ("He was conducted first before the Privy Council"); references to past and future were more likely to occur in dialogue ("Though I should accompany you tomorrow"). The first group's most distinctive words had a clear spatial dominant: verbs

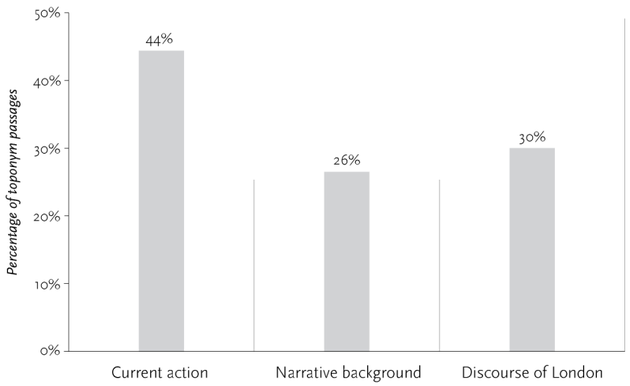


Figure 7.1 Three narrative geographies

Given that only 200 passages were examined, future research may significantly correct these initial figures, just as specific genres may show a preference for one or the other of these spatio-temporal systems. It would make sense, for instance, if adventure stories maximized the role of the foreground, naturalist novels that of the background, and essayistic writings that of "quasi-normative" toponyms.

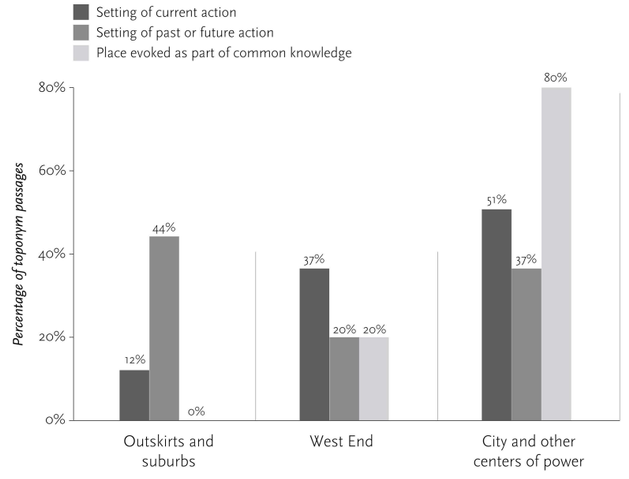


Figure 7.2 Narrative geographies and urban structure

Current action is typically associated with the West End (37% of the cases), and with the composite space of the City and other centers of power (51%), while the outskirts of London appear in a mere 12% of the cases. When we turn from foreground to background, however, the picture reverses itself: districts and villages around London are mentioned in 44% of the cases, while the presence of the West End is halved (from 37 to 20%). Finally, the outskirts are completely absent from the "discourse of London", 80% of which is divided into four main clusters: financial and political power (the Bank of England, Westminster), trade (Cornhill, Smithfield, Billingsgate), the law (the Temple, Chancery, Newgate), and history (Old London Bridge, Whitehall, Buckingham Palace).

of movement ("conducted", "reached", "followed", "entered"), spatial nouns ("walls", "churchyard", "gate", "window"), descriptive adjectives ("narrow", "dark", "melancholy", "strong"), plus indications of social intercourse ("confidence", "respect", "invited", "announced", "attended") In the second group, aside from dialogic markers ("speaking", "replied", "exclaimed") and the contractions typical of colloquial style ("he's", "can't", "wouldn't"), we found a strong hypothetical register ("imagine", "suppose", "think", "somewhere"), plus an odd financial fixation ("notes", "bill/s", "pounds", "capital", "trade", "property"). And as if these differences weren't enough, a *third* group of place-names emerged, which had to do neither with the present, nor with the past or future of the story. Here are a few examples:

> Look at the list of Directors. We've three members of Parliament, a baronet, and one or two City names that are as good,- as good as the ***Bank of England***. If that prospectus won't make a man confident
>
> In the most careless, good-humoured way, he loses a few points; and still feels thirsty, and loses a few more points; and, like a man of spirit, increases his stakes, to be sure, and just by that walk down ***Regent Street*** is ruined for life.
>
> Having concluded his observations upon the soup, Mr. Osborne made a few curt remarks respecting the fish, also of a savage and satirical tendency, and cursed ***Billingsgate*** with an emphasis quite worthy of the place.
>
> We traced her to her new address; and we got a man from ***Scotland Yard***, who was certain to know her, if our own man's idea was the right one. The man from Scotland Yard turned milliner's lad for the occasion, and took her gown home.
>
> Mrs. Honeyman sternly gave warning to these idolaters. She would have no Jesuits in her premises. She showed Hannah the picture in Howell's Medulla of the martyrs burning at ***Smithfield***: who said, `Lord bless you, mum,' and hoped it was a long time ago.

If the first two groups of passages had presented London as the space of enigmatic private trajectories – "Whereas a young boy, named Oliver Twist, absconded, or was enticed..." – this third group had a public and almost *normative* ring: it implied that everyone knows (or should know) what the Bank of England, Billingsgate, and Scotland Yard stand for. Its locations played no role in the narrative proper, but acted as so many signposts in what we could call "the discourse of London": a small ideological compendium of the British capital.

Three literary geographies, then: the sharp, active foreground of current events; the hazier, subjective background of the narrated world; and the impersonal layer of a quasi-normative discourse (**Figure 7.1**). The data are then rearranged in **Figure 7.2**, to show the elective affinities between the three geographies and the social configuration of London.

As is often the case with our work at the Lab, the initial idea – quantifying and mapping novelistic emotions – turned out to be neither easy, nor particularly satisfying: in the end, the map of the emotions of London was only partially accomplished. But in pursuing this objective, we found empirical evidence that supported existing theories about emotions in public; we showed how established narratological polarities (foreground/background, story/discourse) preside, not only over the temporality of narrative, but over its geography as well; and we discovered a striking discrepancy between real and fictional geography, while also sketching the first lineaments for a future "semantics of space". Corroboration, improvement, and discovery: the three axes which have defined the variable relationship between quantitative literary research and existing scholarship. Corroboration, improvement, and discovery. Eventually, the day for theory-building will also come.