

LITERARY GEOGRAPHIES

Introduction: Mapping as Process

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Abstract:

This Special Issue originates from the ‘Mapping Space, Mapping Time, Mapping Text’ conference held online at Lancaster University, and in collaboration with the British Library, as part of the AHRC-funded *Chronotopic Cartographies* project. The nine articles in this edition of *Literary Geographies* ask: how might unquantifiable space and place be mapped and how might narrative, with its temporal and mobile nature, best be visualised? This introductory article draws on the work of *Chronotopic Cartographies* to examine digital literary mapping as process. The project’s primary aim was to address the problems inherent in superimposing the fictional onto pre-existing maps of the real. Our solution was to use topological graphs which allow for mapping truer to literature itself: relative rather than absolute, multiple rather than definitive, and endorsing interpretive subjectivity. Our method puts as much emphasis on the *process* of the mapping as it does on the map itself. The first part of this article introduces the concept of the activity of mapping itself via an articulation of the core methods from the project, outlining the stages of the progression from text to map: textual mark-up, graph generation and visualisation analysis. This is illustrated in relation to H. G. Wells’ *War of the Worlds* and Virginia Woolf’s *To the Lighthouse*. The second part shifts attention to the articles in this special issue which share this leitmotif of mapping and, together, cluster under the contention that there is neither one map, nor one method. Mapping, here, is seen as an iterative process.

Keywords: literary mapping; topology; chronotope; space; time; text; Woolf; Wells.

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Introduction: The Chronotopic Mapping Process

the object is created in the process of creativity, as are the poet himself, his world view, and his means of expression. (Bakhtin 1986: 120)

an event can be communicated, it becomes information, [and then] one can give precise data on the place and time of its occurrence. (Bakhtin 1981: 250)

This paper, with Bakhtin, advocates the process of creation—active mapping—over the ‘ready-made’ or pre-existing object—the map. What Bakhtin contends of the text, its author, perspective and language (that it is fundamentally open, embodied, subjective and situated) finds synergy in what we say of the map. Mapping narratives, or literary geographies, must be relative and dynamic.

This aversion to, or suspicion of, the ‘ready-made’ was a key motivation in the AHRC-funded *Chronotopic Cartographies* project (2017-20) in the Department of English and Creative Writing at Lancaster University. The project’s critical underpinning, method, and tools speak to the problems of how to deal with the fact that literary spaces often have at best tenuous relationships with real-world (Bakhtin’s ‘ready-made’) geographies. In Bakhtinian terms, absolute mapping is akin to a ‘naive realism’ that deducts from rather than illuminates meaning: ‘we must never confuse the *represented* world with the world outside the text [...] nor confuse the listener or reader of multiple and varied periods, recreating and renewing the text, with the passive listener or reader of one’s own time’ (Bakhtin 1981: 253). To elide the literary with the real, then, is a misperception, since the text, through reading, is continually recreated. Reading chronotopically is an antidote to the abstraction innate in viewing literary spaces through a lens of the fixed and finished because it recognises that texts are particular and interpretation is a process.

In contrast to the kinds of referential mapping onto abstract and pre-existing objects enabled by ArcGIS and similar mapping tools, then, *Chronotopic Cartographies* follows Bakhtin in developing a model of literary topology that prioritises *relative* and *multiple* over *absolute* and *fixed* mapping. This allows *all* literary texts to be mapped, regardless of whether they engage in and refer to real-world places. By employing network graph models, in which relative positions are generated out of the XML code, maps are created out of the text itself by means of the chronotope (sites where the temporal and spatial intersect). From Bakhtin, we have derived the organising principle of *major* and *minor* chronotopes. Our *major* chronotopes relate to five broad spatial typologies that encompass a full range of possible literary spaces. Our *chronotopes* are extrapolated from Bakhtin’s ‘Forms of Time and of the Chronotope in the Novel’. For us, as for Bakhtin, chronotopes are representations of narrative and narrative, like reading and representing, is a form of process.

Mapping Place

Our project begins with the premise that absolute mapping and real-world maps can, at best, only go so far in helping to fully locate and spatialise a text. Take the following passage from *The War of the Worlds*, for instance:

Directly below him the balloonist would have seen the network of streets far and wide, houses, churches, squares, crescents, gardens—already derelict—spread out like a huge map, and in the southward *blotted*. Over Ealing, Richmond, Wimbledon, it would have seemed as if some monstrous pen had flung ink upon the chart. Steadily, incessantly, each black splash grew and spread, shooting out ramifications this way and that, now banking itself against rising ground, now pouring swiftly over a crest into a new-found valley, exactly as a gout of ink would spread itself upon blotting paper. (Wells 2017: 93)

On the surface, this might seem to conform to spatial realism: it concerns ‘real,’ locatable places, and alludes to forms of cartographic objectivity—both directly (the chart) and indirectly (via the balloon to Henry Mayhew (1852) and, perhaps, Dickens (Dickens 1994: xxxix)).¹ But the passage does not simply describe place. Instead, it begins to open up a dialogue between reader and map. The map is a metaphor, a way of describing the world through a borrowed or assumed perspective. The use of an inverted simile, rather than direct metaphor—with the map as the tenor, place as the vehicle, and both as resemblances not representations—has a qualifying and distancing effect. Greater London, the narrator asserts, would look like a map of itself if one were, like the omniscient persona, able to view it that way. Or at least this is the case for fixed aspects such as streets, churches, squares, crescents, and gardens. Soon, though, its visibility or mappability is tempered. Named places such as Ealing, Richmond, and Wimbledon defy fixity, and change, here figured as decay, is registered via violently widening black spots.

At this point, the landscape becomes a different form; the vision of ‘Dead London’ is better communicated via an image of blotting paper. So, the potential readability of the map is swiftly invaded by the illegible, the excess, the superfluous. This is communicated, and accentuated, through a shift in tense: ‘would have *seen*’ morphs into the almost homophonic ‘would have *seemed*’. Maps, language and, by implication, text are inadequate means to express space in process or in time. Landscape and language are drawn together in the extended map metaphor and, if the landscape is a map, it is one rendered illegible by the very medium of its expression. Once process or movement is introduced, then, we must do away with the map since—as J. B. Harley (2001) has famously shown—maps embody stable meanings that Wells’ narrative swiftly contests.

What is more, the map is a cultural object; its black patches recalling the darker shading on Charles Booth’s poverty maps (Booth 2019). The imagery of black ink spreading also draws on contemporary metaphors for the development of urban conurbations as in George Gissing’s *The Nether World* (1899), where Crouch End is described as a ‘dark patch [...] spread[ing] further,’ (Gissing 1992: 251) or preempting Forster’s ‘red rust’ of London’s spreading and ‘the red suburban stain’ of Wealdstone in

Rebecca West's *Return of the Soldier* (Forster 2000: 240; West 1998: 9). But, of course, in Wells' narrative the analogy is turned on its head: suburban sprawl becomes the metaphor for an actual invasion—not of the land by human occupation but of the humans themselves. As a result, simply plotting *The War of the Worlds* onto a map of Greater London can tell us very little of the text's complexities, since the map is a starting point that is soon insufficient as either tenor or ground to capture the rapid urban expansion: the spread of (and through) suburbia. In the end, it all comes down to perspective. In de Certeau's (2011) terms, Wells' narrative, with its bird's-eye view, enacts the map it evokes. The view from above encapsulates the perspective of the balloonist, the invader and the narrator.

In contrast, when we turn to Woolf's *To the Lighthouse* the narrative is much more grounded, the perspective is focalised and the world is seen through the limited yet mobile eyes of the characters in a fashion akin to de Certeau's 'tour' type of description. *To the Lighthouse* is concerned with the passing of time in contrast to the seeming constancy of space:

They would, she thought, going on again, however long they lived, come back to this night; this moon; this wind; this house: and to her too. It flattered her, where she was most susceptible of flattery, to think how, wound about in their hearts, however long they lived she would be woven; and this, and this, and this, she thought, going upstairs, laughing, but affectionately, at the sofa on the landing (her mother's); at the rocking-chair (her father's); at the map of the Hebrides. All that would be revived again in the lives of Paul and Minta; 'the Rayleys'—she tried the new name over; and she felt, with her hand on the nursery door, that community of feeling with other people which emotion gives as if the walls of partition had become so thin that practically (the feeling was one of relief and happiness) it was all one stream, and chairs, tables, maps, were hers, were theirs, it did not matter whose, and Paul and Minta would carry it on when she was dead. (Woolf 2008: 92)

For Mrs Ramsey, space has more permanent assurances as a crutch for memory, imbued as it is with her character and inheritance that she imagines flowing into the Rayleys—a name perhaps too conveniently close to the Ramseys for any assurance of complete dissociation. Here the map both grounds the text in place, and acts as a frame or containing device for the self-perpetuating cycle of domesticity. This is because what Woolf is really charting is time not space. The map is part of a series of objects that, far from being objects alone, are Mrs Ramsey's belongings. They are specific and personal: '*this* moon, *this* wind, *this* house'; her mother's sofa; her father's rocking chair; their map. And space—the Hebrides, the house—become part of that architecture of feeling. As Mrs Ramsey stands at the threshold, the 'walls of partition' become imperceptibly thin, the house echoes thought and memory, and the mind is materialised in its physical structure.

Bakhtin and the Chronotope

Two contemporary writers, two 'real-world' maps, two vastly different texts, times, spaces. And yet, in both, the amalgamation of time and space to express value is why both novels

are ripe for just the kind of chronotopic analysis that informs the *Chronotopic Cartographies* project. Bakhtin's account, in 'Forms of Time and the Chronotope in the Novel', demonstrates how 'all the novel's abstract elements—philosophical and social generalisations, ideas, analyses of cause and effect—gravitate towards the chronotope' (Bakhtin 1981: 250). In other words, aspects of time and space are central to reading and interpreting literature and determining narrative, plot, character, action. Different chronotopes (e.g. 'the threshold'; 'the road') hold different narrative and formal values for literature. This enables the spatial dimensions of literature to be foregrounded and recognised as dynamic elements of narrative, form, and meaning. It also allows for the relative mapping of literary place and space at multiple scales. Bakhtin differs from other major theorists of time, space or narrative in his insistence on the 'intrinsic connectedness of temporal and spatial relationships [...] in literature' (Bakhtin 1981: 84). And so, it is this interaction that creates narrative value and gives form to language and the literary text. Bakhtin works against the Aristotelian and subjective Cartesian traditions, in which time is considered apart from space, and both apart from meaning. The chronotope also discards the grounds of Euclidian geometry and Newton's three dimensions. It is influenced instead by the Kantian theory that space and time are 'indispensable forms of cognition, beginning with elementary perceptions and representations' (85). As in Einstein's theory of the time-space continuum, however, the distinction between time and place, between history and geography, is diffused. According to Morson and Emerson, 'the relation of the chronotope to Einstein's "time-space" is something weaker than identity, but stronger than mere metaphor or analogy' (Morson and Emerson 1990: 367). Bakhtin writes that he is borrowing 'time-space' 'almost as a metaphor' (almost, but not entirely). It is, then, a representation of a representation, where physical 'time-space' is rendered and re-fleshed in literary narrative.

In his description of the chronotope, Bakhtin re-determines the concept of literary genre in spatio-temporal terms. Bakhtin surveys the history of the novel and organises the form into six main chronotopes: ordeal, everyday life, adventure, idyllic, folkloric, romance. These generic chronotopes 'determine to a significant degree the image of man in literature' or, in other words, specific images or perspectives that remodel the world (Bakhtin 1981: 85). In our model, we depart from Bakhtin's historicist/thematic objective (one made clear in the chronotope essay's subtitle 'Notes towards a Historical Poetic'). But we follow his lead structurally, creating five spatio-temporal forms for literature which correspond to his generic chronotopes and draw some of the spatial characteristics from Bakhtin's original. These are:

1. *Correspondent Places*, in which fictional worlds have a high degree of what Bakhtin defines as 'specificity and concreteness,' a locality and relative knowability of time-space (Bakhtin 1981:100). They are worlds that correspond to actual, historically existing geographical places. These places can be identified through realistic details such as place-names, streets, cities and regions of a real country, and so on.
2. *Indeterminate Spaces* cover fictional worlds that are generically non-specific, and contain more of what Bakhtin defines as the 'abstract' quality of space (Bakhtin 1981: 101). The second chronotype concerns a kind of location that is also a dislocation:

there are places and objects around you, but they are not specifically named or identified and you do not really know where you are. The external world may also reflect the character's internal state.

3. *Nested Worlds* constitute an integration of the 'real' and the fictional, the 'concrete' and the 'abstract,' the 'native' and the 'alien' (Bakhtin 1981: 102). Here, imaginary worlds located within a real context; people, events and objects are all fully recognisable as those of the everyday world but the immediate setting has no direct real-world correspondence and local features (houses, families, towns, topographical details) are given fictional names.
4. *Fantasy Worlds* are those of the purely imaginative and are often what Bakhtin defines as 'abstract-alien' realms (Bakhtin 1981: 101) that contain their own 'peculiar consistency and logic' (102). In 'abstract' fantasy worlds, neither time nor space need adhere to 'real-world' constraints of linearity. This category of texts encompasses two primary spatial forms: entirely fictional realms and texts which bridge 'real-world' geographies and fantasy ones.
5. *Spaces of Exile* concern lost worlds or places that cannot be returned to. This group of texts concerns literary worlds or places that are defined in terms of absence. Chronotopically, they concern being cut off, remote in time and space from a particular site. They are also likely to be centred on tropes of exile and on the contrast between past and present or memories of the past. Frequently, though, private loss (registered spatially through exile or migration, and temporally through maturity) and collective loss bleed into each other. The movement of exile implies a spatial displacement from homeland, but it also implies temporal change.

Bakhtin's model also allows for chronotopic foci that cut across all categories. Chronotopes emerge as the 'organising centres for the fundamental narrative events of the novel,' as the place where 'knots of narrative are tied and untied' (Bakhtin 1981: 250). Our schema incorporates three time-spaces derived from Bakhtin's 'major' chronotopes alongside 'minor' or 'motivic' chronotopes taken from the essay's 1973 'Concluding Remarks', appended in 1973, in which Bakhtin further delineates the significance of these chronotopes for narrative and plot generation. Bakhtin's chronotopic structures are incorporated into the spatial schema for our project, vitally informing the visualisations generated out of the text (see Figure 1).

Coding Chronotopically: Spatial Frames

At the core of the project and facilitating the literary mapping is a tailored spatial schema that we use to manually mark up texts and make them legible to computers. This process allows us to convert close chronotopic readings of texts into topological maps. Our method defines the fundamental unit of literary space as the *topos*, a *spatial frame* that combines *chronotopic value* (experienced time-space) with a specific textual *location*. The whole text is blocked out into spatial frames which are each assigned a distinct spatio-temporal form within which action occurs. This mark-up then generates the core forms of the topological visualisation:

- node (topos) = chronotope + location;
- connection = the means by which these topoi chunks are linked
- toporefs = micro settings within the topoi

So, a topos identifies both where each section of narrative is set but also how that setting is characterised in terms of Bakhtin's chronotopes. Each specific place (topos) is given a name ideally derived from the text itself (e.g. 'Mrs Ramsey's bedroom'). For example, the opening of *To the Lighthouse* is coded as follows:

<topos type = 'parlour' framename = "drawing-room">













Symbol	Name	Description
	Encounter	An unexpected happening, sudden shift, any meeting. Can occur anywhere, but frequently on the road.
	Road	Paths, travel, journey, options, coming and going, wandering.
	Castle	Confinement, imprisonment, stasis, discomfort, dark, visible traces of the past.
	Idyll	Familiarity, comfort, happiness, pleasure, peace, respite, self-contained, unified, stable, homely, known.
	Idyllic Wilderness	The wild, openness, freedom, untouched, the earth, the natural world, unity.
	Anti-Idyll	Dystopias, post-apocalyptic settings, mechanical, the idyll destroyed, invaded, or made alien. Can be exterior or interior.
	Threshold	The hall, the corridor, the staircase, the street, docks, stations, liminal spaces, emotionally charged, intense, sublime, excess, a place of contrasts.
	Parlour	Interior, room, defined, bounded, hosting guests, where the public and private merge, where dialogues happen, a site of political and commercial intrigue.
	Provincial Town	Community, locality, rustic, petty-bourgeois, specific locales, quaint little houses and rooms of the town, sleepy streets.
	Public Square	Dynamic, crowd, forum, metropolitan, the internal externalized (the private/intimate becomes public), theatrical (place of the clown, the rogue, the fool).
	Distortion	Elsewhere, miraculous, bewitched, dreams, hallucinations.
	Metanarrative	For sections of text without a concrete sense of space, which could be internal (e.g. commentary, direct address to the reader) or external (e.g. glosses, framing statements, contained texts; authorial/editorial notes, etc) to the narrative. See metatextual / paratextual / intratextual connection types.

Figure 1. Chronotopic Symbols and Descriptions.

Here, the setting (topos) in which the represented action occurs is the ‘drawing-room’; its chronotopic value is the ‘parlour’ since the drawing-room is bounded space within which family dialogue is interrupted by a guest. A series of images, in the novel’s first paragraph, build up a sense of domesticity inherent in Bakhtin’s ‘parlour’ chronotope. James Ramsey, pictured sitting on the drawing-room floor, busies himself making a scrapbook from illustrations of household items cut from an Army and Navy catalogue. In his half-conscious, half-daydreaming mind, a jumble of synecdoches for the homely and natural worlds—‘The wheelbarrow, the lawnmower, the sound of poplar trees, leaves whitening before rain, rooks cawing, brooms knocking, dresses rustling’ (Woolf 2008: 1)—combine so that all become a part of internal space. The parlour’s sense of intimacy is also brought about both through the reference to James’ ‘private code, his secret language’ and through the narrative’s beginning in a muted version of *in medias res*: the text starts with an answer to an extra-textual question: ‘Yes, of course, if it’s fine tomorrow’ (Woolf 2008: 1).

Connections

After blocking the text out into spatial frames, each frame is then linked to the next via connection tags. Connections identify the forms of relation between the spatial frames outlined above. These connections can be physical (explicit or implicit movement between places by characters), mental (as when a character imagines, recalls or projects into a different place) or narratological (as when the narrative jumps to a new setting). These different kinds of connection are depicted on the graphs with differently coloured and styled lines (see Figure 2).

Having introduced the drawing-room as a site of tension and the Lighthouse as a site of desire, the narrative jumps into that space of potential future (Woolf 2008: 8)

‘But it may be fine—I expect it will be fine,’ said Mrs. Ramsay, making some little twist of the reddish brown stocking she was knitting, impatiently. If she finished it tonight, if they did go to the Lighthouse after all, it was to be given to the Lighthouse keeper for his little boy, who was threatened with a tuberculous hip; together with a pile of old magazines, and some tobacco, indeed, whatever she could find lying about, not really wanted, but only littering the room, to give those poor fellows

```
<connection source = “drawing-room” target = “the Lighthouse” relation =
“projection”>
</connection>
<topos type = “castle” framename = “the Lighthouse”>
```

who must be bored to death sitting all day with nothing to do but polish the lamp and trim the wick and rake about on their scrap of garden, something to amuse them. [...] to see the same dreary waves breaking week after week, and then a dreadful storm coming, and the windows covered with spray, and birds dashed against the lamp, and the whole place rocking.

Symbol	Name	Description
————	Direct	Where frames are physically connected and the narrative shifts seamlessly between two related topoi.
.....	Indirect	Where topoi which are not immediately reachable from the current frame are referenced. E.g. points viewed from afar.
- - -	Projection	Where the narrative movement is conducted through imagination, memory, dreams, etc.
- - - -	Interrupt	Where the narrative movement reverts to a previous state after a tangent or diversion.
- - - -	Jump	Where the narrative movement is disconnected, or broken by interrupts.
.....	Metatextual	Where the narrative refers externally to a pre-existing work.
.....	Paratextual	Where the narrative contains a sub-narrative that is linked but could be separated from it.
.....	Intratextual	Where the narrative addresses the reader directly or draws attention to its own fictionality.

Figure 2. Connection Types.

So, in the example of markup given here, the narrative employs spatial contrasts as the setting shifts from bounded domestic space to another, albeit in via Mrs Ramsey’s imaginings. The kind of connection therefore is a projection, marking a shift spatialised in the mind, and providing an early example of the lighthouse’s presence in the text as a place of mental projection, of imagination and conjecture, substantiating the ‘to’ of the novel’s title.

As well as the kinds of connection discussed above (and see Figure 3), there are three further forms of connection that relate to the text in relation to other texts or diegetic levels. The perspective of the novel’s middle section, ‘Time Passes’, scales out in stark contrast to the sharply focalised framing sections as the passage of ten years is visualised in the increasing de-domestication of the Ramseys’ summer house. The section’s sixth chapter consists of third-person narrative descriptions of the seasonal changes on the Isle of Skye interspaced with fragments of report-like updates on events in the Ramsey family (Woolf 2008: 108):

The Spring without a leaf to toss, bare and bright like a virgin fierce in her chastity, scornful in her purity, was laid out on fields wide-eyed and watchful and entirely careless of what was done or thought by the beholders.

```
<connection source = “the Isle” target = “interjection” relation = “intratextual”>
</connection>
<topos type = “metanarrative” framename = “interjection”>
```

[Prue Ramsay, leaning on her father's arm, was given in marriage. What, people said, could have been more fitting? And, they added, how beautiful she looked!]

Here, the connection tag allows us to mark the shift in diegetic level (and, implicitly, register) as the narrative goes from describing the changes to external space—the platitude of nature personified—to reporting commonplace hearsay. The hope of spring may seem to pre-emptively reinforce the shift from death to life in Prue's marriage but the change in perspective and use of parenthesis accentuates the transitory nature of the seasons and the promise they might seem to bring.

Since *To the Lighthouse* is full of real-world referents, mapping the text using standard GIS tools would mean that all named places with geographical coordinates would be given equal status. And, even more significantly, all indistinct places—the drawing-room, the terrace, the lawn—would be omitted. The chronotopic mapping process, by contrast, allows us to mark up all named places, referential and non-referential, their chronotopic values and how the narrative *passes between* these literary spaces. This method of mapping from the literature outwards is particularly important for nominally correspondent, but highly idiosyncratic, texts like *To the Lighthouse*, since so much of the book is concerned with moving between various small-scale locations in one house and its grounds.

What coding the novel chronotopically really brings to fore is the extent to which the narrative is played out spatially. It is more common for Woolf's text to be read in terms of time, with considerable critical attention given to the middle section in particular (Banfield 2000; Gabler 2014; Heine 2019; Levenson 2005). And yet, close reading for space registers how the house provides the grounding for the plot, connecting the novel's three distinct sections together. Our method not only allows such scaled-up mapping (seeing an area in greater detail) but also circumnavigates the critical minefield of setting (of why Cornwall is 'superimposed' onto Skye). This is because it takes the text on its own terms. It also acknowledges the book's spatial structure and preoccupation with the internal since it allows for and distinguishes between inward and outward spaces. Our code produces maps (see below) which display spaces and chronotopes relatively and through an active process in a way which aligns with the book's narrative method of depicting the 'merging and flowing and creating' of consciousness (Woolf 2008: 69).

From Text to Map

[W]hatever [...] meanings turn out to be, in order to enter our experience (which is social experience) they must take on the *form of a sign* that is audible and visible for us (a hieroglyph, a mathematical formula, a verbal or linguistic expression, a sketch, etc.). Without such temporal-spatial expression, even abstract thought is impossible. (Bakhtin 1981: 84)

So, our method allows us to map the subjective value of real and imagined places. After we have coded the texts, we run them through an iPython notebook to create a series of graph files which are then imported into a network programme called Gephi. From this

Map Format	Description
Complete Map	A full map of a text showing the topoi (nodes), their associated toporefs (place-names referenced in a node), and the connections between them (lines/arrows).
Topoi Map	This shows the topoi and the connections between them without their associated toporefs or chronotopes.
Syuzhet Map	This shows the topoi and their connections as they appear sequentially across the text in the order in which the tale is told.
Fabula Map	Corresponding to the “Syuzhet” above, the “fabula” map shows the topoi and connections in the order in which events actually occurred (not the order as told).
Topoi and Chronotopic Archetypes	This shows the relationship between the topoi and the underlying chronotopic types. For many texts this graph appears as disconnected clusters. However, where topoi change chronotope over the course of a text and the same place changes identity (e.g. “Prison” becomes “Idyll”), the clusters become interlinked.
Deep Chronotope Map	This is the simplest map to understand. It represents each chronotope as a single node. The scale of the nodes reflects the percentage of the text dedicated to each chronotope.

Figure 3. Full List of Maps Generated.

we move into making the final visualisations in Adobe Illustrator. We are then left with a sequence of maps (Figure 3).

The map sequence, in Bakhtinian terms, visualises the spatio-temporal aspects of texts as a series of signs. The value of the sequence lies in the fact that it enables comparison, both within the sequence of one text and between different texts in the corpus. Not all maps are useful for all texts. The complete map, for instance, is better suited to shorter texts. In the map sequence for *To the Lighthouse*, the ‘syuzhet’ map (see Figure 4) is especially striking.

The syuzhet map registers the underlying spatiality of the novel’s tripartite structure: the predominantly internal spaces of ‘The Window’ (‘dining-room’, ‘drawing-room’, ‘bedrooms’) are connected to the more external ‘lawn’ and ‘boat’ of ‘The Lighthouse’ via the less delineated ‘house’ of ‘Time Passes’. According to Woolf, and as illustrated by her sketch diagram of the novel’s plot (see Figure 5), *To the Lighthouse* was conceived as ‘two blocks joined by a corridor’ (Woolf 1982: 48). Woolf’s annotation, like the chronotope, describes the text in terms of space-time. Two vertical blocks or spatial synecdoches—‘The Window’ and ‘The Lighthouse’—are connected by the horizontal line of time, made visible as a corridor. This ‘H’ form is traceable in the syuzhet map, where the topoi clusters on either side are joined by a less populated middle.

Setting aside the direct lines that connect ‘lawn’ to ‘dining-room’ (the ‘lawn’ is present in both the first and last section of the novel), the topoi of the middle are joined

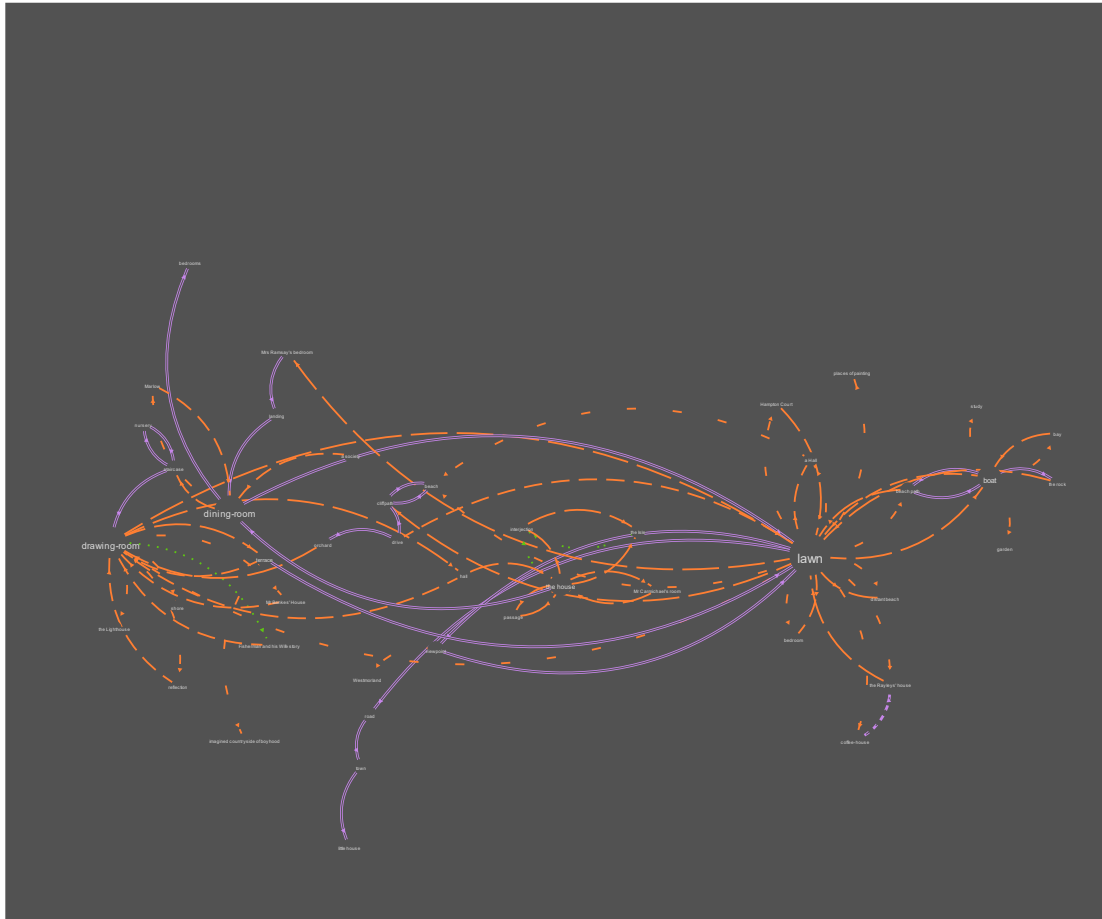


Figure 4. Syuzhet map for *To the Lighthouse*.

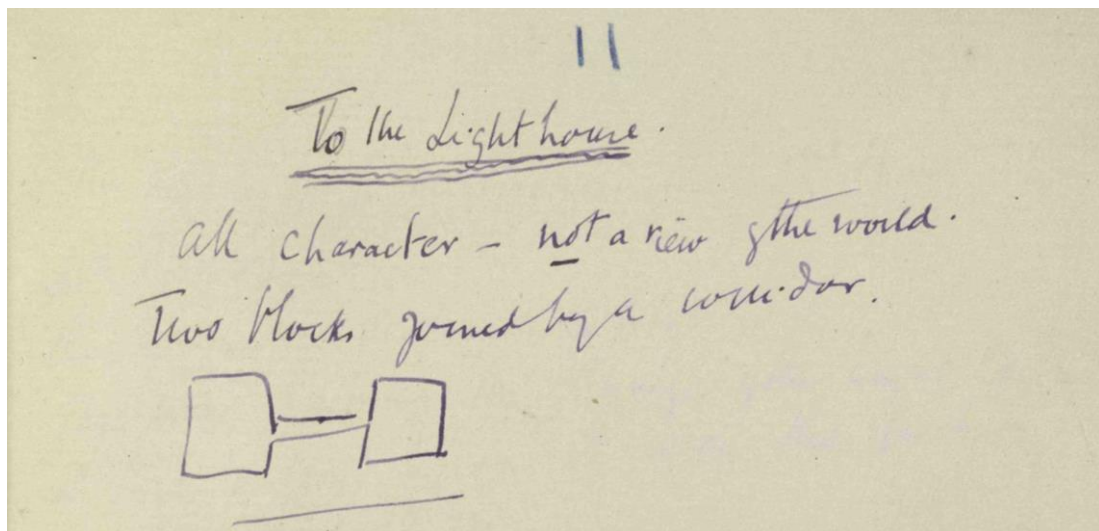


Figure 5. Woolf's sketch map of *To the Lighthouse* (Woolf 2011-2019).

by jumps, interrupts and intratextual connections that imply the prominence of time over space. This is because 'The Window' all takes place on a September evening and 'the Lighthouse' on a September morning. 'Time Passes', on the other hand, covers a ten-year hiatus. The overall dominance of jumps and interrupts demonstrates that while the plot

moves directly through the limited spatial confines of the house and its locality, the ‘other’ places—‘Marlow’ and ‘Mr Bankes’ house’, for instance—are imagined or recalled rather than visited. This all speaks for the telling of the tale: the narrative abruptly shifts between multiple perspectives. It also shows how mapping depth as well as breadth counters the seeming simplicity of the plot.

Such an example illustrates a core point that we seek to make about the chronotopic mapping process: that visualisations created directly from literary works can combine productively with analysis of content to show how deeply spatial meaning is integrated.

Literary Topology

Rather than a geography of *To the Lighthouse*, what our project offers is its *topology*, or more precisely, its *topologies*.² Unlike past models and interpretations of literary mapping, that plot characters and places onto flat historical maps or offer narrative accounts of real place (via biographical or historicist analyses), the chronotopic and topological method ultimately insists on the need for layering, relativity, and iteration to communicate the complexity, multiplicity, and mobility of literary space and the intricate interplay of real and imagined places. This is all the more vital for texts, like *To the Lighthouse*, with predominantly correspondent places, since the surface realism creates a referential veil that hides or distracts from their innate fictionality. So, despite being ‘correspondent’ with, in Woolf’s case, biographical parallels or, elsewhere, with the geographical precision of strictly demarcated streets, areas and landmarks, literary space has imaginative and symbolic significance that simply cannot be traced through a real-world map.

Reading spatially and mapping relatively also exemplifies the way in which novels, across genres, work to ‘nest’ the imaginary within a world that seems to correspond to real locations. When the novel is plotted onto a ‘real’ map, the spatial experience of physically close but narratively distinct places is completely lost; depth is sacrificed to the levelling demands of isotropic space. The topology of the novel lends equal prominence to the otherwise ‘unmappable’ (because non-referential to the real) sites, and recognises the subjectivity and fluctuations of literary places. In fact, to suggest that a text invites you to look at a map and no further is to make a critical judgment. To read literature via a map alone is to suggest that spatial meaning is stable and can be pinned down. What I hope to have shown is that, like the ‘huge map’ or ‘chart’ representing London in *The War of the Worlds*, a referential layer offers one method of understanding or interpretation among many. Maps, graphs, or any form of visible sign, form part of the process of reading and analysis rather than the result.

Mapping Space, Mapping Time, Mapping Text

Space, time, and text, though myriad and wide-ranging, are here held together in a shared leitmotif of mapping. The articles in this Special Issue cluster around the contention that there is neither one map, nor one method of mapping; that mapping, too, is an iterative process. As James Kneale, in turn looking to Kitchin and to Hones, points out in his article, modern spatial theory recognises maps as sites of ongoing meaning and sense making. And

collectively these papers register the quandaries and simplifications involved in uncomplicatedly reading textual, abstract or imagined spaces as real or against the real. The articles are part of the conceptualisations of textual and narrative place and space that have emerged in light of the spatial and digital turns. Together, they explore the different kinds of digital models most useful for the Humanities, proposing insights from the Humanities (such as dealing with and being comfortable with unquantifiable space and place) that can reshape digital methods. If we release mapping from the bounds of GPS, this issue asks, what might be revealed and uncovered through the alternative forms of mapping that emerge? In so doing, how might we meaningfully connect virtual, actual and imaginative pathways? How, too, can we productively connect visual and verbal meaning; can we ground time in space? These questions are tackled via a series of approaches to mapping, and these lines of enquiry form the sections of this special issue.

James Kneale's lead article, 'Mapping Lovecraft', concerns centres of power and how their accompanying centripetal and centrifugal forces create othered hinterlands. As Rob Shields explains, the concept of the periphery is complex, part-metaphor, part literal: places on the margins are 'towns and regions which have been "left behind" in the modern place for progress [...] not always on geographical peripheries but [...] placed on the periphery of culture' (Shields 1993: 2). Mapping hinterlands, then, means mapping places that are beyond the edges of space, time and representation. To Kneale, re-mapping Lovecraft requires thinking about absence which, in turn, can inform thinking about place. Lovecraft's writing inhabits and transgresses the borders of utterance. In dwelling on the nameless things beyond representation, Lovecraft's works perform 'distancing tactics' both consciously and explicitly—through mediating devices—and through the more clandestine means of omission. Lovecraft's racism means that slavery is muted, and that points of contact occur beyond the bounds of representation. Kneale proposes the chronotope of the threshold as a useful way into thinking about the hinterlands; the openness and potentiality of the threshold provides a useful critical antidote to the introversion of biographical readings of space.

The succeeding section, 'Mapping Place, People and Things', centres on materiality and objects in space, and yet all the papers in this section nevertheless register the difficulties or impossibility of fixity, of pinning things down. Lena Mattheis, in 'Poetic Space: mapping how poetry takes place', revisits the site of spatial form, first explored by Joseph Frank in the 1940s (Frank 1968), in which poetic space is understood as the text on the page, a spatialisation of structure, apart from the concrete 'real-world' space it may seem to reference. In her readings of contemporary poems by Shapcott and Kay, Mattheis proposes a schematic of poetic space in which reading emerges as a form of mapping. Also concerned with how texts interact with and reenvision the object in space, Peterle and Rossetto's piece explores the theory of ontocartography via a close reading of McGuire's graphic novel *Here* (2014). McGuire's novel, they argue, conceives of space and time as extra-human, centring around objects rather than people, and in so doing visualises manifold possible time-spaces.

The following section, 'Mapping on the Move', concerns tours and travel, pilgrimage and how mapping movement can be problematic or, in the case of Ritchie's reading of Blake, 'anti-cartographic'. To Ritchie, Blake's illustrations—despite the critical tendency to

read to the contrary—resist the map. In fact, Ritchie argues, Blake’s illustrations ‘draw the viewer into the picture, into the sense of an unfolding, *embodied* journey that comes into existence through movement itself’. Embodiment is key here; once the moving subject is brought into consideration, the static and linear logic of space and time are insufficient to capture the state of becoming inherent in pilgrimage. Also questioning the adequacy and aptitude of fixed image or object in the representation of movement, Goudarouli *et al* examine the tricky negotiation between legibility and accuracy in big data. In ‘Visualising the Uncertain in Heritage Collections: Understanding, exploring and representing uncertainty in the First World War British Unit War Diaries’ Goudarouli *et al* demonstrate how uncertainties seep into records and render absolute mapping idealistic at best. Following on from this, Barker *et al* present the difficulties of inherent in visualising time and how, like Pausanias, history can be told through place without privileging one over the other. The authors demonstrate how, in eliding myth and history, ancient temporality destabilises time from a modern perspective. In answer to this, Barker *et al* propose two models to visualise time which allow them to take Pausanias’s temporality on its own terms: measuring by genealogy and measuring by event (or chronotopically). All papers in this section advocate flexibility in approach as promoted by Doreen Massey (2005), for whom place can only ever be expressed, or even conceived, in conjunction with the temporal. All places, this section illustrate, are produced through the meeting of individual trajectories through time, so that mapping on the move can be understood in terms of mapping the event.

The final section, ‘Topological not Topography: Mapping Literary Space’, moves beyond the fixities of Cartesian space and, heeding the internal logic of spatial relations, asks what happens when we allow the text to dictate the form. For Gavin and Gidal, in ‘Digital Geography without Maps: the Conceptual Structure of Ossianic Space’, thinking topologically rather than topographically is the most useful way go about representing the geographies of James Macpherson’s Ossianic myths. This is because, unlike conventional maps, networks allow for pan-dimensional links (from history to myth, from ancient to contemporary). Bushell and Butler’s piece on mapping *Robinson Crusoe* also advocates multiple maps across time and space. In their piece, ‘Three Ways of Mapping *Robinson Crusoe*’, Bushell and Butler demonstrate how topology can be employed to visualise and illuminate just this kind of embodiment in space, and finish with another form of embodiment in which visualisations of narrative space—here, immersion—can provide a new way of reading and experiencing literature. Concluding the special issue, Hay and Richardson’s article ‘Visualising Time and Space in C. S. Lewis’s *The Chronicles of Narnia*’ explores the potential of 3D visualisations for literature. Like the quasi-mythic Ossianic space, and the nested world of Crusoe’s island, Richardson and Hay examine ‘secondary worlds’. Where two-dimensional visualisations allow these worlds to be presented synchronically, showing the spatial structure of the text as a whole, working with the three-dimensional can offer a form of analysis which recognises the characters’ embodiment in the fictional world, and can demonstrate how the spatial structures of that world change p is part of a seri over time.

The papers here contribute to what Andrew Thacker defines as critical literary geography by stressing ‘the distance from an effortless mapping of represented landscapes

in literary texts’, raising ‘more complex questions about space and power’ and exploring ‘how space and geography affect literary forms and style’ (Thacker 2005: 60). Together, this special issue demonstrates that the distance from an effortless—read: unproblematic, unchallenging, preconceived—mapping could not be greater.

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Notes

¹ Cruikshank’s title image for *Sketches by Boz* (1836) has two figures (Dickens and Cruikshank himself) looking down from a balloon, alluding to Dickens’ Preface which presents his writings as ‘a pilot balloon’ and the balloon race in the ‘Vauxhall Gardens by Day’ sketch.

² For a much more detailed account of literary topology see two papers (‘Digital Literary Mapping I’ and ‘Digital Literary Mapping II’ 2022) from the *Chronotopic Cartographies* team in *Cartographica*.

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