

# Visualizing the Railway Space in Fontane's *Effi Briest*

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Is visualization interpretation? It is a question not traditionally posed in humanities research—an area of study in which words on paper historically have been seen as the primary medium through which we express our interpretive, analytical, and critical ideas. It is a question, however, that in light of the myriad visualization tools available to the humanist researcher, ultimately needs to be dealt with in the field of German Studies. This paper is a contribution to the emerging field of spatial humanities and, as such, it answers the question in the affirmative: Visualization assists readers of literary fiction with the construction of mental models of a given work for a potentially clearer interpretative understanding. Our hypothesis is that the geographical railway space in nineteenth-century German Realism was not merely a passive setting for the development of this emblematic technology—that is, it is not a mere record of the remarkable European railway expansion—but rather, such space was the mechanism for the development of a literary-technical culture that was foundational to the poetic realism of the era. Indeed, the fictive representation of the railway marked a further “coming to terms” with the always problematic constellation of humans, our technologies, and the natural world that surrounds us.

The realist novels of Theodor Fontane (1819-1898) make use of this space to proclaim, in part, that “this is real.” That is, as a literary realist, Fontane uses actual train routes to bolster his novels’ depiction of reality. As Youngman argues, “[Literary] realists, like scientists, proposed to ascertain and depict reality, and thus borrowed liberally from the world of science” (3). He continues, “realists reinforced their claims to ‘truth’ by introducing scientific and technological developments into their work” (Youngman 3-4). The use of such developments was foundational to the success of this nineteenth-century literary movement with its characteristic mix of reality, in this case technology, and myth. But realists also grasped the dialectic at play. Fontane specifically understood that technology never really can outrun poetry or vice versa—the two exist as part of the dialectic.

*Effi Briest* (1895), the literary focus of this project, is an especially effective example of the techno-mythic mixture, and the humanities-based mapping tool, [Neatline](#), helps illustrate the unique dynamic. With approximately sixteen trips, the railway is a constant and central presence in the novel. By focusing on rail travel, our project allows investigators to visualize space and time, two dimensions that are closely connected to the train, and to gain a new understanding of this classic work.

Beyond the use of scientific and technological developments, literary realists employ repetition as another mechanism to show “this is real.” Eric Downing argues that Fontane and his contemporaries used this technique to show the world “the way it is” with all of its

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seemingly superfluous repetitions (3). Repetition, however, also lies at the root of much mythology, especially when it comes to punishment as described below. For example, our goal with this project is to provide a basis for claims about repetition not only with text, but more importantly, with a spatial visualization as well. We suggest that *seeing* the repetition in literary realism and *seeing* the space taken up by the development of the railway is more helpful to the literary critic than simply reading words describing it.

One question we wish to address as we develop our hypothesis is: What is the most effective means of analyzing the literary railway space? In *Black Devil and Iron Angel* (Catholic UP, 2005), Youngman deploys text to interpret the railway space and its meaning in the novels of Fontane, among several other nineteenth-century German and Austrian authors. One difficulty with this approach to literary research is that we have a frustratingly limited vocabulary to describe space. While we have verbal conventions like cardinal direction and azimuth measurement, visualizations like maps can offer a much deeper understanding of the work in question. Most helpful in regard to a discussion of spatial visualization is Donna J. Pequet's *Representations of Space and Time* (Guilford Press, 2002). In this work, Pequet cites a preponderance of evidence indicating that the construction of an effective mental model "is facilitated when language and graphics are combined" (178)—an approach we adopt in *Mapping the Literary Railway*. Pequet relies heavily on a 1992 study by Glenberg and McDaniel who identify the shortcomings of language when it comes to expressing space. If one were to examine the English language prepositions for space, for example *above*, *across*, *nearby*, and *upon*, it becomes very clear that we have the perceptual capability to produce much finer-grained distinctions than those relatively imprecise prepositions allow (458). For example, the title of a paper can be located not only above the text, also be centered on the page. It would therefore be *cenbove*, so to speak. According to Glenberg and McDaniel, we lack such a word for many reasons including "learnability, speed of communication, and the capacity of a limited system of phonemes to permit discrimination among the multiplicity in prepositions alone" (458-59). Moreover, even if our language structure allowed for a word like *cenbove*, it would still lack the precision that a visualization can provide. Pequet further challenges her readers to "try verbally describing the shape of Canada or the United States" (179). It cannot be done as effectively or as accurately using our limited language system as it can with a map.

We do not argue that text cannot under any circumstances capture space and time. Literary fiction and the masterful writers who make their living depicting fictional worlds are well documented. In an essay titled "Forms of Time and of the Chronotope in the Novel: Notes toward a Historical Poetics" (1937-38), the twentieth-century Russian philosopher and literary critic Mikhail Bakhtin describes the unique art of depicting time and space in a novel, positing the idea of the chronotope—the name he gives "to the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature" (84). Bakhtin uses the chronotope to express the essential indivisibility of space and time, and, in distinguishing artistic fiction from, perhaps, popular fiction, Bakhtin maintains that the literary artistic chronotope fuses "spatial and temporal indicators [...] into one carefully thought-out, concrete whole" (84). In the "literary artistic" as he calls it, "time [...] thickens, takes on flesh, becomes artistically visible; likewise, space becomes charged and responsive to the movements of time, plot, and history" (84) indicating that the chronotope exists at the intersection of the axes of space and time—as does a project

using Neatline. In our project, to adapt Bakhtin's words, time becomes digitally visible; likewise, space becomes charged and responsive to its computerized visualization.

If the essence of the art of writing literary fiction lies in this idea of the chronotope, why utilize such seemingly mundane visualizations as maps and timelines? Why break down the essential beauty of the work of art using digital tools? The answer is, of course, because literary studies is based on analysis, interpretation, and criticism. That which Theodor Fontane does with space and time is masterful—there are at least two works in the secondary literature on Fontane which deal with the chronotope in his novels—but that is precisely what drives scholars to deconstruct it. In his analysis of the role of the railway in Fontane's novels, Alfred Heinemann hypothesizes that by the time Fontane is writing, the railway is a simple background device, and that the relationship between humans, technology, and nature was no longer problematic. We argue the opposite. While representations of technology in Fontane are often subtle and unobtrusive, they remain critical to understanding his works, especially when it comes to the railway and the unique space he allows it in his novels—a space that exists somewhere between reality and fantasy.

In Fontane's works the railway is often juxtaposed with darkly mythical manifestations—a notable, but not unusual intersection mix of poetic fantasy and science in nineteenth-century German Realism. Fontane relies on both myth and science/technology in his storytelling to explain the fundamental unpredictability in the world. Both myth and science/technology function to soothe or horrify and, crucially, both depend on metaphor. As noted above, the railway in Fontane's novels serves two purposes: It represents a realist 'truth,' while at the same time it serves as a metaphor that ironically engenders a new mythology in the nineteenth century.

Crucially, “[literary] realists, like scientists, proposed to ascertain and depict reality, and thus borrowed liberally from the world of science” (Youngman 3). The computer of its era, there was no more effective technological development for this claim in the nineteenth century than the railway. It was not uncommon in the nineteenth century to write about the train and its associated rail network in terms we, in the twenty-first century, would associate with the computer and the Internet in the ways these could improve our lives.<sup>1</sup> The railway promised to make everyone smarter, spread democracy, and improve national security. One could even “visit” far flung towns by viewing them through the train car window without even getting off the train.

True to Fontane's form, the railway is central to Fontane's *Effi Briest*. In addition to the aforementioned approximately sixteen railway rides undertaken by the novel's protagonists, the railway maintains a constant presence—with more indirect references to passing trains and discussions of rail routes. [Our Neatline project](#) includes not only the likely routes taken by Effi and other travelers, but also period pictures of the [rail stations](#)' (Fig. 1) and [timetables from the era](#) (Fig. 2), thereby further instantiating the spatial “reality” of Fontane's realist novel.

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<sup>1</sup> For further discussion of this point, see Mathieu Schwann's work on the nineteenth-century German railway advocate Ludwig Camphausen in *Ludwig Camphausen* (Essen, 1915) and Youngman's analysis in *We are the Machine* (Camden House, 2011). See also *Cyberspaces of Everyday Life* (University of Minnesota Press, 2006).

Context: Geert Innstetten, one of Frau von Briest's suitors from her youth, has just proposed to Effi. In order to prepare for the wedding, Effi and her mother travel to Berlin. After they are finished, they return home to Hohen-Cremmen via train.

Date: "end of August," approximately August 26 1875 (22).†

Departure: Berlin?‡



Berlin Hauptbahnhof, 1879, courtesy of Wikimedia Commons

Fig. 1 Berlin Hauptbahnhof.

160 **German Railways.**

**BERLIN, OEBISFELDE, HANOVER, COLOGNE, PARIS, LONDON,—  
Magdeh-Halberstadter Eisenb.**

E.M.	ORDINARY.				EXPRESS.				Stations.	1-4		1-3		1-2		1-4		1-4	
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...	...	...	...	...	...	...	...	...	Spandau	5 19	9 17	12 16	2 21	7 19	10 16	12 23	8 5	8 20	...
18 1/2	2 50	1 90	1 25	...	...	...	...	...	Westermark	5 43	...	...	...	...	...	...	...	...	...
37 1/2	4 90	3 70	2 50	...	...	...	...	...	Oebisfelde	6 22	...	...	...	...	...	...	...	...	...
43 1/2	5 70	4 30	2 90	...	...	...	...	...	Schönhausen	6 30	6	...	...	...	...	...	...	...	...
57	7 40	5 60	3 70	...	...	...	...	...	Schönhansen	7 4	...	...	...	...	...	...	...	...	...
65 1/2	8 40	6 30	4 20	9 30	...	...	...	...	Stendal (103)	7 21	10 39	1 50	4 30	5 24	11 31	2 39	...	...	...
...	...	...	...	...	...	...	...	...	Magdeburg	8 20	12 08	2 35	7 0	11 58	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Uelzen	1 12	12 41	3 57	7 2	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Hamburg	...	2 25	3 35	9 5	...	...	...	...	...	...
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...	...	...	...	...	...	...	...	...	Wittenberge dep	5 20	...	12 10	...	6 35	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Stendal	7 40	10 41	2 1	...	9 38	11 36	3 4	2 12	...	...
...	...	...	...	...	...	...	...	...	Vitzkeberg	7 59	...	...	...	9 53	...	3 20	2 44	...	...
...	...	...	...	...	...	...	...	...	Gardelegen	8 20	11 11	...	...	10 16	...	3 54	3 46	...	...
...	...	...	...	...	...	...	...	...	Oebisfelde	9 51	12 42	...	...	10 45	12 30	4 25	4 56	...	...
...	...	...	...	...	...	...	...	...	Lehrte	4 15	7 5	11 0	...	4 50	8 45	10 0	...	...	...
...	...	...	...	...	...	...	...	...	Lehrte (150)	7 30	10 0	1 20	...	4 30	11 10	1 20	...	...	...
...	...	...	...	...	...	...	...	...	Oebisfelde	8 58	11 25	2 45	...	10 35	12 20	...	Sten dal	...	...
...	...	...	...	...	...	...	...	...	Oebisfelde (100)	9 2	11 41	2 50	...	10 50	12 35	4 32	...	...	...
...	...	...	...	...	...	...	...	...	Vorsfelde	9 31	...	...	...	11 2	...	4 46	...	...	...
...	...	...	...	...	...	...	...	...	Fallerleben	9 46	...	...	...	11 13	...	5 0	...	...	...
...	...	...	...	...	...	...	...	...	Gifhorn	10 2	...	...	...	11 24	...	5 19	...	...	...
...	...	...	...	...	...	...	...	...	Lehrte (150)	10 56	12 46	...	...	12 10	1 33	6 16	...	...	...
...	...	...	...	...	...	...	...	...	Lehrte	11 2	12 48	...	...	12 20	1 37	6 21	...	...	...
...	...	...	...	...	...	...	...	...	Hanover (150)	11 21	1 4	2 5	...	12 36	1 54	6 40	...	...	...
...	...	...	...	...	...	...	...	...	Hannover	1 15	4 36	7 16	...	6 40	6 40	11 58	...	...	...
...	...	...	...	...	...	...	...	...	Hannover	1 21	...	...	...	1 48	...	9 28	...	...	...
...	...	...	...	...	...	...	...	...	Cassel	1 51	...	9 41	...	5 12	...	2 30	...	...	...
...	...	...	...	...	...	...	...	...	Frankfort	2 25	...	5 7	...	5 40	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Hannover	2 36	1 24	4 14	...	1 32	3 7	7 40	...	...	...
...	...	...	...	...	...	...	...	...	Wubben	1 5	1 18	...	...	1 37	2 25	8 14	...	...	...
...	...	...	...	...	...	...	...	...	Minden (150)	2 12	2 36	5 15	...	2 45	3 8	9 20	...	...	...
...	...	...	...	...	...	...	...	...	Rotterdam	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Minden (150)	3 0	7 11	5 29	...	3 40	3 13	9 29	...	...	...
...	...	...	...	...	...	...	...	...	Hannover	6 13	4 39	6 56	...	6 53	4 37	12 30	...	...	...
...	...	...	...	...	...	...	...	...	Oberhausen	9 15	6 7	8 11	...	9 23	6 23	3 0	...	...	...
...	...	...	...	...	...	...	...	...	Dusseldorf	10 19	6 48	8 16	...	10 23	7 3	4 26	...	...	...
...	...	...	...	...	...	...	...	...	Beutz	...	...	...	...	11 35	...	5 42	...	...	...
...	...	...	...	...	...	...	...	...	Cologne	11 42	7 35	9 30	...	...	...	7 50	...	...	...
...	...	...	...	...	...	...	...	...	Aix-la-Chap.	...	9 45	12 2	...	3 22	9 55	...	...	...	...
...	...	...	...	...	...	...	...	...	Lille	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Paris	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Brussels	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Ostend	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	London	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	Calais	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	London	...	...	...	...	...	...	...	...	...	...

Fig. 2 German Railway Transit Table 1880.

Hans Pappenheim emphasizes the importance of geographical accuracy and maps to Fontane, writing, "Der Dichter hatte erkannt: das Gelingen der Beschreibung einer Landschaft ist immer abhängig von der Kenntnis der Karte" (30). Such claims to reality in terms of geographical accuracy were of course obvious to the nineteenth-century reader

who would have been familiar with the locations—even Fontane's fictional geography was often based on real locations—and the rail routes available. In *Fontane's Landscape* (Königshausen & Neumann, 2009), James N. Bade celebrates the idea that in the post-Berlin Wall era, Fontane's settings are no longer the historical “blind alleys” Henry Garland bemoaned in his *Berlin Novels of Theodor Fontane* (1980). Garland attributes our previous blindness when it comes to Fontane's works to the Cold War and the fact that readers and researchers outside Warsaw pact countries did not have access to the region of Germany in which his novels are set, a conclusion with which we take slight issue. First, the settings of Fontane, even with the seismic geopolitical shifts of 1989, remain blind alleys to the many readers who are not familiar with Fontane's home state of Brandenburg. And second, the fictional settings, including some of the railway spaces, still require a good deal of research and extrapolation in order to know precisely which geographical area(s) Fontane is using.

The haziness and ambiguities of place serve to remind the reader that *Effi Briest* is a work of fiction. Moreover, this is a work of poetic realism. Not everything is real, scientific, or even technological—but we can shed light on some of the blind alleys and vague regions using spatial humanities. Poetic realism, features a characteristic mix of reality and myth, “dictated by the exigencies of the narrative” (Bade 12-13). This mixture allows Fontane to use space to establish mood and atmosphere, but also to reflect everyday reality (Bade 17). The critic Hugo Aust refers to this mixture of reality and myth as “den Schabernack, den Fontanes Realismus treibt” (69). And the mixture corresponds to the research results depicted on our Neatline map. If one looks at the [dough hook shaped](#) dark blue line (Fig. 3) where most of the travel in the novel takes place, the reader will note where actual geographical reality ends and the fictional fantasy region begins:



Fig. 3 The “dough hook.”

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Berlin and Stettin are real places, and the rail routes are most surely the period routes which a contemporary reader would have recognized. Once Effi and her fellow characters leave Stettin, however, they depart from the real world. Stettin is a jumping off point to the town of Kessin which does not exist. This does not mean, as Bade writes, that “the landscape of realism stays behind as well” (115). To the contrary, such departures from claims of “this is real” are actually quite characteristic of literary realism and highlight the mix of reality and myth.

Kessin does have some basis in geographical reality. It corresponds roughly with Fontane’s experiences in Swinemünde, but it is located ten miles to the east so that Innstetten can more easily get to his meetings with Bismarck (Bade 119). We therefore extrapolated Kessin to be in the vicinity of Misdroy, the modern day Międzyzdroje, Poland. As Bade points out in *Fontane’s Landscape*, “Kessin, with its mysterious moods and key locales, including the ‘Plantage,’ the forest, the beach, and the Chinese grave, becomes [the landscape of Effi’s soul]” (119)—to which we would add, the landscape of her fantasy, as well. It is eerie and inflected with portents of death, danger, exoticism, and mystery. When, for example, Effi urges Innstetten, “Erzähle mir das Wirkliche. Die Wirklichkeit kann mich nicht so quälen wie meine Phantasie” (84), it can be understood, in light of our map, as a cry to return to Stettin and the stability represented by the Berlin-Stettin connection.

Effi’s childhood home in Hohen-Cremmen is another mythical location, but with quite the opposite feeling. Bade and Otto Drude both conclude—and this is helpful for mapping purposes—that Hohen-Cremmen is most likely the village of Nennhausen (Fig. 4) which lies thirty-six miles east of Berlin:

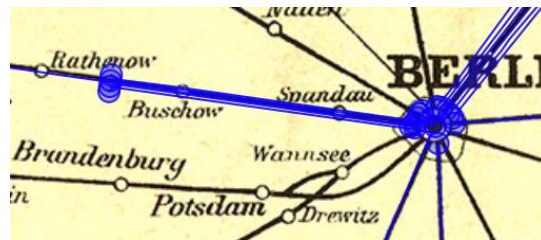


Fig. 4 Nennhausen is the node between Rathenow and Buschow

In determining this location, the authors point to the passage where Effi and her mother arrive at their “Havelländische Bahnstation,” which was “mitten im Luch” (25). This refers to the *Havelländisches Luch* which, according to Drude, could only be Nennhausen (Drude 29). As further evidence of the Hohen-Cremmen—Nennhausen link, they also point to the association of Schloss Nennhausen with the historical Briests (Bade 105). Equally important for our analysis is that Fontane paints Hohen-Cremmen as a place of childhood innocence and pleasures marked by lush gardens, ponds bursting with life, and swings bustling with play. As such, the comfortingly mythical Hohen-Cremmen provides an appropriate foil for the equally mythical, yet intensely foreboding Kessin. And as desirable as Hohen-Cremmen is, the ambitious young Effi is strongly attracted to Berlin as the center of nineteenth-century German society.

In addition to mapping locations, our Neatline visualization further assists with another aspect of poetic realism: repetition—a dynamic that the literary critic Eric Downing points out as central to poetic realism. Repetition allowed realist authors to illustrate the world “‘the way it is’ with all of its characteristic redundancies” (Downing 3). In her work

*Repetition in Discourse: Interdisciplinary Perspectives*, Barbara Johnstone suggests that “repetition can provide a reassuring sense of structure and order” (10) that is made visible, for example, in the Berlin-Stettin link. We also see this aspect of repetition at work in the novel's structure. Most depictions of the railway in *Effi Briest*, for example, are placed in the beginning and end of the chapters, thereby structuring a sense of arrival and departure within the work. Crucially, this structure can also produce a sense of constriction and a Sisyphean sense of futile entrapment as exemplified by the Stettin-Kessin link. The nineteenth-century era of upheaval, epitomized as it was by technological innovations like the railway, was ironically made more structured by its very schedules and timetables.

Our conclusions regarding repetition, and even the use of the train as the “reality” of the time, are borne out by our Neatline map of *Effi Briest* which illustrates the repetitive structure that rail travel provides in the novel. The thickness of the [line](#) which depicts repeated trips runs from Kessin through Berlin to Hohen-Cremmen, and indicates Effi's constant need to stay connected to her ancestral home and family. The thick, dark blue dough hook-like shape that runs between Kessin and Effi's Hohen-Cremmen notably faces westward (Fig. 5):



Fig. 5 Berlin-Stettin and Stettin-Kessin

Despite the apparent pull of the text Eastward—indicated by the Chinese ghost, the [Danziger Schnellzug](#), and [Tripelli's trip to St. Petersburg](#)—the travel space critical for understanding this work is focused on a north-south axis with a westward curve. The line is thick blue at a wide zoom angle, but when one narrows the zoom, it is apparent that the thickness of the line results from the high volume of trips between Kessin and Berlin and, in part, Hohen-Cremmen. This repetitive transit reflects and emphasizes the novel's inherent repetition in the guise of the railway. This is, to paraphrase Downing, the way the world is—or, more accurately—the way the world is shaped in the novel by its travel space.

Critically, there is an aspect of repetition associated with myth as well, specifically as the root of mythological punishment, of which examples are plentiful: Sisyphus rolling the

boulder up the hill only to watch it return to its original position; Prometheus's liver being eaten, only to regrow and be eaten again; Echo's compulsive repetition of what she hears; Narcissus' reflection; sinners reliving their sins in Hell; etc. The bend in the dough hook can be read as marking the instantiation of Effi's punishment. As much as she travels toward home out of the darkly mythical world of Kessin and into to the straight-line axis of reality represented by the Stettin-Berlin connection, she must always travel back as well. Her travels thus take her from the "real" world, where the regularity of the train has a structuring effect and is therefore reassuring, to the bend in the dough hook where the repetition takes on another connotation entirely, and she becomes trapped like a mythological figure in Kessin. Even when she does physically escape by rail to [Bad Ems](#) for the *Kur*—the single blue westward running line—her fate is to be forever stuck in the bend of the dough hook. In fact, it is while she is in Bad Ems that she learns Innstetten has discovered her affair with Major Crampas. This original sin, so to speak, from which she will never escape, is indicated by the thinness of the route to Bad Ems which could never overcome the thick blue line of the dough hook. There will be no *Kur* for Effi, due both to her sin and to the more prosaic social conventions of the era. The only thing Effi can rely on is suffering, loneliness, and death.

Spatial humanities is unique and valuable in enabling and producing new interpretations of texts, as well as new understandings. Our work linking visual representations of the railroad with Fontane's *Effi Briest* helps clarify his approach to realism and does, indeed, lead to a new understanding. By integrating elements of science and technology, Fontane makes his novels more digestible and believable to the reader. It is precisely the railway as the very symbol of the technological reality of the era and its juxtaposition with the mythical that illustrates this key aspect of Fontane's realism. In our project, this juxtaposition is primarily shown via the "dough hook" between Stettin and Berlin, with Berlin acting as the center of the railway activity—a majority of the trips either originate or end there. With its vibrant social life and varied cultural activities Berlin, is decidedly not Stettin, and is therefore everything for which Effi yearns. Stettin, the other end of the dough hook, acts as the center of mystery and fantasy with creepy, old houses and Chinese ghosts. This example highlights one of the reasons we have employed visualization instead of solely textual analysis. Visualizing this information as a map, enables a clearer and more detailed interpretation concerning the role of transit in Fontane's novel: enabling us to visualize the previously unvisualizable—to see the data in a new medium beyond the constraints of text. Working with programs such as Neatline enables an interpretation which goes beyond the textual world on which the humanities have long relied.

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