Visualizing the Railway Space in Fontane’s *Effi Briest*

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Abstract: 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 budding 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. We hypothesize 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, a simple 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.

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 budding field of spatial humanities and, as such, it answers the question in the affirmative. Just as war is a continuation of politics by other means, visualization is indeed a continuation of interpretation by other
means. 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, a simple 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 make use of this space to lay claim to some “truth.” That is, as a literary realist, Fontane uses, in part, actual train routes to bolster his novels’ depiction of the real. As Youngman points out, “[Literary] realists, like scientists, proposed to ascertain and depict reality, and thus borrowed liberally from the world of science” (3). Moreover, “realists reinforced their claims to ‘truth’ by introducing scientific and technological developments into their work” (3-4). The use of such developments was foundational to the success of this nineteenth-century literary movement with its characteristic mix of reality and myth. But realists also grasped the dialectic at play. Fontane specifically understood that technology never really can outrun poetry or vice versa – they are part of the dialectic. Effi Briest (1895), the literary focus of this project, is an especially effective example of this techno-poetic mixture and our Neatline mapping project helps illustrate this unique dynamic.
Beyond the use of scientific and technological developments, another mechanism employed by literary realists to show that “this is real” is repetition. Eric Downing points out that authors used this technique to show the world “the way it is” with all of its seemingly superfluous repetitions. Repetition, however, also lies at the root of much mythology – decidedly not the world the way it is – 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 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 Youngman’s *Black Devil and Iron Angel* (Catholic UP, 2005), he deploys text to interpret the railway space and its meaning in the novels of Fontane, among several other nineteenth-century authors. One difficulty with this tried and true approach to literary research is that we have such limited vocabulary to describe space. We have certain verbal conventions like cardinal direction and azimuth measurement, but such verbiage cannot begin to do what visualizations like maps can do. Most helpful with regard to a discussion of spatial visualization is Donna J. Pequet’s *Representations of Space and Time* (Guilford Press, 2002). Here she cites a preponderance of evidence pointing to the idea that the construction of an effective mental model “is facilitated when language and graphics are combined” (178). She relies heavily on a 1992 study by Glenberg and McDaniel who
point out the shortcomings of language when it comes to expressing space. If, for example, one looks at the English language prepositions for space like “above, across, nearby and upon,” it becomes very clear that “our perceptual apparatus can make much finer metric distinctions” than those relatively imprecise prepositions can (458). For example, the title of this paper is not only above the text, it is also centered. It is therefore, according the Glenberg and McDaniel, cenbove, but we do not have 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, if our language structure allowed for a word like cenbove, it would still lack the precision that a visualization can provide. To put an even finer point on this discussion, Pequet challenges her readers to “try verbally describing the shape of Canada or the United States” (179). It cannot be done using our limited language system and is best left to the type of visualization we call a map.

The different types and sheer numbers of mapping tools currently and relatively recently available to the humanities researcher is remarkable. They range from the many homemade tools, so to speak, often based on the Google Maps API, to the highly analytical Arc GIS, to humanities designed tools like Neatline which we are featuring with our Fontane project. Bethany Nowviskie of Scholars’ Lab at the University of Virginia, the developers of Neatline, describe it thus:

It’s a geotemporal exhibit builder that allows you to create beautiful, complex maps, image annotations, and narrative sequences from collections of documents and artifacts, and connect your maps and
narratives with timelines that are more-than-usually sensitive to ambiguity and nuance (Mediavmons)

The ability to incorporate ambiguity, among other things, is important when one is mapping fictive spaces. Most importantly to this project, however, is that Dr. Nowviskie identifies Neatline projects as “interpretive expressions.” Our mapping and timeline visualization of Effi Briest is precisely that which Nowviskie describes – an interpretive, geotemporal expression that combines period maps, images, timetables, and textual references.

In addition to helping the viewer/reader visualize the previously unvisualizable, tools like Neatline add an element of play to our research – a not necessarily intended, but often-noted aspect of digital humanities research. In so many words, we can fiddle with maps. We can rotate, zoom in, zoom out, and change display symbology, among other things (Pequet 136). In a sense, we are simultaneously playing with the railway as a metaphorical device and, equally as important, we are playing with the digital humanities tool Neatline which allows us to gain a better understanding of the relational nature of space and hopefully make a compelling visual argument regarding the nature of Fontane’s railway space in Effi Briest.

When researchers employ only words to describe space it is supremely difficult to depict this relational nature accurately. Ill equipped, we often end up providing a description of a Newtonian, absolute space characterized by an emptiness awaiting objects “distinct from [other] objects that find their place within it.” That is, because our language is linear, our verbal descriptions, be they oral or written, can only be linear and sequential. Space, however, is relational. It “involves a cognitive structuring of past,
present, and possible situations,“ à la Leibniz and, more recently, Einstein (Nunes 21, 22). One sees in this suggestion of a cognitive structuring process the idea of the indivisibility of space and time. “Relationality,” so to speak, and the Leibnizian/Einsteinian indivisibility of space and time are enormously difficult to capture strictly in text, even by the most skilled of humanist researchers. Neatline, with its mapping and timeline features, allows us to attempt to capture the indivisibility and parse it for analysis and interpretation.

This is not to say, however, that text cannot under any circumstances capture space and time. There is, of course, the case of literary fiction and the masterful writers who make their living depicting fictional worlds. The twentieth-century Russian philosopher and literary critic Mikhail Bakhtin describes the unique art of depicting time and space in a novel. In an essay called “Forms of Time and of the Chronotope in the Novel: Notes toward a Historical Poetics” (1937-38), he posits 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 as we postulate above. 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.” 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). The chronotope exists, therefore, 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 use such 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 that is what literary studies critics do for a living. We analyze, interpret, and critique. That which Theodor Fontane does with space and time is masterful – there are at least two works in the secondary literature on Fontane that deal with the chronotope in his novels – but that is precisely why we seek to deconstruct it. In his analysis of the role of the railway in Fontane’s novels, Youngman does not, for example, let the railway stand as a simple background device as Fontane critic Alfred Heinimann does when he suggests that the railway was unimportant in literary fiction by the time Fontane was writing. Further, Heinimann posits that the relationship between man, technology, and nature was no longer problematic (19). While representations of technology in Fontane are often subtle and unobtrusive, this does not mean that they are unimportant, and this is especially the case 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, for example, the railway is often juxtaposed with the supernatural – an interesting, but not unusual intersection mix of poetic fantasy and science in nineteenth-century German Realism. One notes a reliance in many of Fontane’s novels on both myth and science/technology given their commonalities. Both
are means of storytelling used to explain the fundamental unpredictability in the world. Both can function to soothe or horrify. And finally, both depend on metaphor. As noted above, the railway in Fontane’s novels serves two purposes. It bolsters his truth claims, and it serves as a metaphor itself ironically engendering a new mythology.

Let’s deal first with the railway as the reality of the day, or possibly a technological manifestation of the new reality of the nineteenth century. As noted above, “[literary] realists, like scientists, proposed to ascertain and depict reality, and thus borrowed liberally from the world of science” (Youngman 3). There was no more effective technological development for this claim in the nineteenth century than the railway. To put it in modern terms, the railway was the computer of its era. 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. The railway promised to make everyone smarter, spread democracy, and improve national security, among other things. One could even, “visit” far flung towns by viewing them through the train car window without even getting off the train – a nod to the virtual reality craze of the modern era.

Fontane depicts the centrality of the railway quite effectively in Effi Briest. It is a constant presence in the novel with approximately sixteen railway rides alone – and that does not even count the numerous simple references to the railway. Our Neatline project allows us to visualize the so-called truth claims associated with the train. The project includes not only the likely routes taken by Effi and other travelers, but also period pictures of the rail stations along with timetables from the era thereby further
instantiating the spatial “reality” of Fontane’s realist novel. Hans Pappenheim reminds us of the importance to Fontane of geographical accuracy and maps, “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. They would have been familiar with the locations – even the fictional ones were 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 “blind alleys” Henry Garland bemoaned in his work on the novels of Fontane – The Berlin Novels of Theodor Fontane (1980). Garland attributes our blindness, when it comes to Fontane’s works, to the vagaries of the Cold War. We take slight issue with Bade’s conclusion. 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 Brandenburg. And second, the fictional settings, including some of the railway space, while not blind alleys, are certainly hazy and require a good deal of research for elucidation.

The haziness and ambiguities help the reader to remember 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 hazy regions using spatial humanities. In poetic realism, as pointed out earlier, there is always a characteristic mix of reality and myth “dictated,” as Bade points out, “by the exigencies of the narrative” (12-13). This mixture allows Fontane to use his space to
establish mood and atmosphere, but also to reflect everyday reality (Bade 17). The mixture of reality and myth is what the critic Hugo Aust refers to as “den Schnabernack, den Fontanes Realismus treibt” (69). And the mixture corresponds interestingly to the research results depicted on our Neatline map. If one looks at the dough hook shaped dark blue line 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. Berlin and Stettin are real places and the rail routes are most surely the routes of the time that the contemporary reader would have recognized. Once Effi and her fellow characters leave Stettin, however, they depart the real world. Stettin is a jumping off point to a Kessin that 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 “this is real” are actually quite characteristic of literary realism. It is part of the mix referred to above.

Kessin, however, 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 Miedzyzdroje, 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 I 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 Instetten, “Erzähle mir
das Wirkliche. Die Wirklichkeit kann mich nicht so quälen wie meine Phantasie” (84), it can be read, in light of our map, as a cry to return to Stettin and the stability represented by the Berlin-Stettin connection.

The other mythical location with quite the opposite feeling is Effi’s childhood home in Hohen-Cremmen. Bade and Otto Drude both conclude, and this is helpful for mapping purposes, that Hohen-Cremmen is most likely the village of Nennhausen that lies thirty-six miles east of Berlin. As textual evidence they point to the passage where Effi and her mother arrive at their “Havelländische Bahnstation” that was “mitten im Luch” (25). This refers to the Havelländisches Luch which could only be Nennhausen according to Drude (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 gardens and 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 and what it represents in nineteenth-century German society.

In addition to mapping locations, the other aspect of poetic realism that our Neatline visualization assists with is 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 on repetition, Barbara Johnstone suggests that “repetition can provide a reassuring sense of structure and order” (10) that we see, for example, in the Berlin-Stettin link. We also see this aspect of repetition at work in the novel. Most depictions of the railway in Effi Briest, for example, are in the beginning and end of the chapter in which it is mentioned thereby structuring a sense of arrival and departure within the work. We would add here, however, that it can also provide a sense of constriction and a Sisyphean sense of futile entrapment as we see in the Stettin-Kessin link. The era of upheaval, ironically epitomized by technological innovations like the railway, was made more structured by its very schedules and timetables. Moreover, the repetitive, structured, regular aspect of the rail movement fostered a realist aesthetic function as well because repetition lies at the heart of both myth and reality.

Our conclusions regarding repetition, and even on the use of the train as the “reality” of the time, are borne out by a quick glance at our Neatline map of Effi Briest. One sees very quickly the structure that rail travel provides in the novel. The thickness of the line running from Kessin through Berlin to Hohen-Cremmen shows Effi’s constant need to stay connected to her ancestral home and family (Fig. 5). The thick, dark blue dough hook like shape, referenced above, that runs between Kessin and Effi’s Hohen-Cremmen faces westward. Despite therefore the apparent pull of the text Eastward — the Chinese ghost, the Danziger Schnellzug, Tripelli’s trip to St. Petersburg — the travel space, which is critical space, 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, one notices that the thickness of the line is due to the sheer number of trips between Kessin
and Berlin and, in part, Hohen-Cremmen. This of course speaks to the repetition inherent in the novel in the guise of the railway. This is, to use Downing’s words, the way the world is or, more accurately, the way the world is shaped in the novel by its travel space.

But then again, there is an aspect of repetition associated with myth as well. More specifically, repetition lies at the root of mythological punishment. The examples are plentiful. Sisyphus rolls the boulder up and down the hill; Prometheus’s liver is eaten, regrows, and is eaten again; Echo can only repeat what she hears; Narcissus can only stare at his reflection; sinners relive their sins; etc. The bend in the dough hook is the instantiation of Effi’s punishment. As much as she travels toward home out of the eerie fantasy 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. In other words, her travels 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 veneer entirely. 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 is original sin, so to speak, from which she will never escape. The lack of repetition indicated by the thinness of the route to Bad Ems could never overcome the thick blue line of the dough hook. There will be no Kur for Effi due
to her sin and the more prosaic social conventions of the era. The only thing Effi can rely on is suffering, loneliness, and death.

In sum, our work with the railroad highlights Fontane’s techniques of realism. By adding elements of science and technology, Fontane cements his version of Germany and its culture, thus making it more digestible and believable to the reader. Moreover, the railway not only illustrates an important aspect of Fontane’s realism, but it also mediates such realism. Indeed the railway, the very symbol of the technological reality of the era, is often juxtaposed with the mythical. In our project, this juxtaposition is primarily shown via the “dough hook” between Berlin and Stettin. As our map shows, Berlin is the center of the railway activity—a majority of the trips either originate or end in Berlin. It is also the center of society, and everything for which Effi wishes. However, 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. By placing this information (data even, if you will) into a visualization like a map, we can make interpretation clearer. This information is especially useful in the form of a map, because it allows one to visualize the previously unvisualizable—to see the data in a new medium beyond solely text. This was indeed our goal both in starting this project and also in continuing to work with Neatline – to establish an interpretation that goes beyond text. The humanities have, for centuries, consisted of a textual world —where research is done in words, sentences, chapters, and books. Spatial humanities can bring
about new interpretations of texts and new understandings — whether the objects of study be Shakespearian sonnets, Goethean dramas, or German realist novels.

**Works Cited**

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