# Infrastructural Poetics

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The modern era is characterized by the emergence of pervasive global infrastructures: traffic systems, electrical grids, resource cycles, information channels. Many of these infrastructures are designed to be overlooked. Built underground or often hidden, they are accompanied by discourses that legitimize and normalize them so that they become part of their users' mental routines.[1] Literature has not merely depicted this increasingly infrastructured world but has been shaped by it on several levels. This can best be seen in the paradigmatic genre of the modern era: the novel. The modern novel emerges in the eighteenth century and comes into its own in the age of industrialization, whose infrastructures—urban architecture, railroads, coal mines, alienated labor—are among its main thematic resources.

Numerous scholars have examined the representation of particular infrastructures in particular novels, writers, or periods, while others have traced the infrastructures that sustain the production and distribution of literature. It was not until the early twenty-first century, however, that the concept of infrastructure itself received sustained attention in literary studies.[2] This infrastructural perspective can build on discussions of the "poetic" dimension of infrastructure in the social sciences. The anthropologist Brian Larkin locates this poetic dimension in the symbolic surplus of spectacular infrastructure; Lauren Berlant locates it in the creative capacity infrastructure unfolds in interrelating otherwise disparate elements.[3]

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1    Brian Larkin, "The Politics and Poetics of Infrastructure," *Annual Review of Anthropology* 42 (2013): 327–343; Susan Leigh Star, "The Ethnography of Infrastructure," *American Behavioral Scientist* 43, no. 3 (1999): 377–391; Dirk van Laak, "Garanten der Beständigkeit. Infrastrukturen als Integrationsmedien des Raumes und der Zeit," in *Strukturmerkmale der deutschen Geschichte des 20. Jahrhunderts*, ed. Anselm Doering-Manteuffel (Munich: Oldenbourg, 2006): 167–180.

2    Steffen Richter, *Infrastruktur. Ein Schlüsselkonzept der Moderne und die deutsche Literatur 1848–1914* (Berlin: Matthes & Seitz, 2018); Bruce Robbins, "The Smell of Infrastructure: Notes Toward an Archive," *boundary 2* 34, no. 1 (2007): 25–33; Michael Rubenstein, Bruce Robbins, and Sophia Beal, "Infrastructuralism: An Introduction," *Modern Fiction Studies* 61, no. 4 (2015): 575–586.

3    Larkin, "The Politics and Poetics of Infrastructure"; Lauren Berlant, "The Commons: Infrastructures for Troubling Times," *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.

This article offers a complementary approach to infrastructural poetics by shifting the perspective from the poetic dimension of infrastructure to the infrastructural dimension of poetics. Grounded in literary studies, the following discussion explores how the pervasive infrastructuration of modern society shaped the poetics of the modern novel. It draws on two interrelated senses of the term 'poetics': the internal organization of a text (for example, by plot structures and narrative modes) and the underlying conception of what literature is and does. Both of these changed as writers were reorganizing their texts to render the scope of modern infrastructure and the experience of living in a world pervaded by it. The article begins with a brief sketch of novelistic modes in the eighteenth and nineteenth centuries to indicate the diachronic dimension of this infrastructural poetics. Zooming in on the early twentieth century, the article argues that the infrastructuration of the novel attained a new level in the high modernist period as avant-garde writers structured their texts with covert, interrelated patterns that were foundational in investing a seemingly disjointed text—and world—with meaning.

From its eighteenth-century beginnings, the modern novel typically traced the development of one or several individual characters over time. As the novel situated these individuals in their social surroundings, it also developed a wider, systemic perspective. In the nineteenth century, 'panoramic' novels such as Dickens's *Bleak House* (1852–53), George Eliot's *Middlemarch* (1870–71), and Zola's *Germinal* (1894) subordinated the individual point of view to this systemic perspective in order to portray an entire community or a cross-section of modern society.[4] This approach can be understood as an attempt to negotiate the increasing infrastructuration of social life. Accelerated mobility systems, new communication channels, mass media, and other infrastructures of the industrial age engendered new modes of sociality and intensified existing ones. To record an individual character's development, the novel thus had to encompass a greater geographical and social range as well as the rapidly increasing amount of information at the character's disposal. Moreover, the individual's actions in an infrastructured society could have a much broader impact in a much shorter time. This presented significant challenges to traditional modes of storytelling and encouraged the emergence of the panoramic novel.

This process of differentiation allowed the panoramic novel to represent both the macro- and the micro-level of infrastructuration by exploring how it affected the individual within modern society. A paradigmatic example is Dickens's *Bleak House*, which alternates between an authorial narrator's sweeping descriptions of the industrial megacity of London and an individual character's account of her adventures within this city. The overarching perspective of the god-like narrator provides epistemological security by suggesting that, for all its ramifications, the modern world

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4    Gerhard Friesen, *The German Panoramic Novel of the 19th Century* (Berne: Lang, 1972).

can be understood and organized into a coherent whole. Tracing the urban infrastructure and its effects plays an important role in this endeavour, as the opening lines of the novel indicate.

> London. Michaelmas Term lately over, and the Lord Chancellor sitting in Lincoln's Inn Hall. Implacable November weather. […] Smoke lowering down from chimney-pots, making a soft black drizzle, with flakes of soot in it as big as full-grown snow-flakes—gone into mourning, one might imagine, for the death of the sun. Dogs, undistinguishable in mire. Horses, scarcely better; splashed to their very blinkers. Foot passengers, jostling one another's umbrellas, in a general infection of ill temper, and losing their foot-hold at street-corners, where tens of thousands of other foot passengers have been slipping and sliding since the day broke (if the day ever broke), adding new deposits to the crust upon crust of mud, sticking at those points tenaciously to the pavement, and accumulating at compound interest.[5]

All of these infrastructures—jurisdiction, heating systems, transportation, finance—will have profound effects on the characters. These individuals too can become and remain coherent wholes even if they cannot fully grasp the multiplying interrelations in which their lives unfold. This is confirmed by the alternating first-person report of the protagonist, Esther Summerson, who introduces herself as "not clever" (ch. 3) but becomes increasingly aware of the hidden connections in her social and urban environment as her maturation progresses.

These promises come into doubt as the infrastructuration of society expands. The technological innovations of the nineteenth and early twentieth centuries dramatically widens the mobility of people and information, so that the individual is continually confronted with strangeness. At the same time, it organizes daily life in such a way that existential affordances such as food and water supply, sanitation, and income depend on processes and people outside the individual's range of perception. These complications register in novelistic narration. In the late nineteenth century, writers begin to delimit or abolish the authorial narrator and to question the coherence of the character-narrator. Instead, they explore figural narration, which limits its scope to an individual character's immediate experiences and foregrounds the insecurities this narrowed scope entails. Figural narration merges the macro- and micro-perspectives on infrastructure by curtailing both. It reflects a world whose infrastructuration has expanded to an extent that defies even the overarching perspective of the omniscient narrator. On the micro-level, figural narration replaces the coherent character-narrator with techniques such as free

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5     Charles Dickens, *Bleak House*, eds. George Ford and Sylvère Monod (New York: Norton, 1977), 5.

indirect speech, interior monologue, and stream of consciousness, which register how the character's perception is channelled and delimited by these infrastructures.

The shift to figural narration was a key factor in the emergence of the modernist novel. It was accompanied by a range of other techniques across literary and artistic genres that disrupted holistic and coherent representation. As the influential poet and critic T. S. Eliot emphasized, however, disruption did not equal arbitrariness or chaos. On the contrary, the purpose of literature was that "of controlling, of ordering, of giving a shape and a significance to the immense panorama of futility and anarchy which is contemporary history."[6] In this sceptical view, which many of Eliot's contemporaries shared, order and significance could no longer credibly be imposed from above. God was dead, political and military leaders were disgraced by the incompetent mass slaughter of the Great War, families and local communities were disintegrating into the anonymity and the newfound freedoms of modern life. Literary representations that were holistic or coherent were no more credible under these circumstances than god-like authorial narrators and linear character development.

What order and significance remained in a world that had "lost all form," Eliot pointed out, must be traced laboriously underneath: in belief systems, social ties, shared narratives, and collective imaginaries that had been broken apart and buried under the onslaught of modern life but which could be traced, unearthed, and recombined by the aesthetic sensibilities and the formal techniques of avant-garde literature.[7] In this view, literature is itself a process of infrastructuration in that it constructs cognitive and aesthetic configurations that underlie and shape modern life in ways that most users (readers) are not fully aware of but need for their well-being or even their very existence. "It is difficult / to get the news from poems," the avant-garde poet William Carlos Williams wrote, "yet men die miserably every day / for lack / of what is found there."[8] The most famous—and arguably most influential—example of this covert infrastructuration is the novel on which Eliot based his abovementioned discussion of modernism: James Joyce's *Ulysses* (1922).

Like other novels of the modern metropolis, from John Dos Passos's *Manhattan Transfer* (1925) and Virginia Woolf's *Mrs. Dalloway* (1925) to Alfred Döblin's *Berlin Alexanderplatz* (1929), *Ulysses* situates its characters in material and social environments that are infrastructured to an unprecedented degree. These characters' lives

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6    T.S. Eliot, "*Ulysses*, Order, and Myth," in *Selected Prose of T.S. Eliot*, ed. Frank Kermode (London: Faber, 1975): 175–178, 177.

7    Cf. Astradur Eysteinsson, *The Concept of Modernism* (Ithaca: Cornell University Press, 1990); Timo Müller, *The Self as Object in Modernist Fiction: James—Joyce—Hemingway* (Würzburg: Königshausen & Neumann, 2010); Daniel Joseph Singal, "Towards a Definition of American Modernism," *American Quarterly* 39, no. 1 (1987): 7–26.

8    William Carlos Williams, *Journey to Love* (New York: Random House, 1955), 56.

and personalities are defined by skyscrapers, bridges, and prisons; by transport, health, and legal systems; by newspapers, advertisements, and movies; by electricity, toilets, and trash cans.[9] Unlike their nineteenth-century predecessors, these novels employ figural narration, stream of consciousness, and other techniques of episte-mological disruption to represent the pervasiveness of modern infrastructuration and its unsettling effects on the individual. This multilayered sensitivity manifests, for example, when Leopold Bloom, the protagonist of *Ulysses*, is watching a ship ex-porting Guinness beer:

> As he set foot on O'Connell bridge a puffball of smoke plumed up from the para-pet. Brewery barge with export stout. England. Sea air sours it, I heard. Be inter-esting some day get a pass through Hancock to see the brewery. Regular world in itself. Vats of porter, wonderful. Rats get in too. Drink themselves bloated as big as a collie floating. Dead drunk on the porter. Drink till they puke again like christians. Imagine drinking that! Rats: vats. Well of course if we knew all the things.[10]

Bloom's stream of consciousness identifies and interrelates many of the infrastruc-tures on which the Guinness brewery relies: trade networks, hygiene regulations, the internal infrastructures of the factory (a "regular" world in more senses than one) and the hidden ones of modern mass-produced nutrition.

As in other novels of the modern metropolis, the surface of *Ulysses* is dominated by anonymity, speed, and information overload. This ensures that readers share the characters' experience of epistemological destabilization. Just as the inhabitants of the city rely on routines to reestablish some degree of order and meaning, however, the novels rely on a variety of covert patterns that help the reader understand how disparate elements of the novel interlink. Bloom can do his errands because he is familiar with the geography of the city and many of its cultural codes and social in-stitutions. The reader can follow his physical and mental wanderings by attending to the subplots, leitmotifs, and other underlying patterns that structure the novel.

The most prominent of these underlying patterns is the Homeric *Odyssey*. The protagonists of Joyce's novel move through the streets and transport systems of Dublin just as Odysseus and his comrades travel through the Mediterranean on their ship and as Odysseus' family negotiates the physical and social infrastructures of Ithaca. Both the myth and the urban geography provide underlying patterns that readers can use to reestablish a degree of order, control, and significance:

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9    Kate Marshall, "Sewer, Furnace, Air Shaft, Media: Modernity Behind the Walls in *Native Son* and *Manhattan Transfer*," *Studies in American Fiction* 37, no. 1 (2010): 55–80; Richter, *Infras-truktur*; Michael Rubenstein, *Public Works: Infrastructure, Irish Modernism, and the Postcolonial* (Notre Dame: University of Notre Dame Press, 2010).

10   James Joyce, *Ulysses* (London: Penguin, 2000), 191.

to make sense of the novel and of the epistemological confusions of modern life that the novel renders. Eliot describes this as a "method" that allows the novel to incorporate a great range of "living material" and give form to a world that has "lost all form."[11] In more recent terminology, the work these patterns do is best described as infrastructural: they are constructed underneath the surface texture of the novel; they are elemental for the reading experience because they generate meaning by interrelating diverse elements of the novel—and the world it depicts—across time and space; they require some training from the user (reader) but that training quickly subsides into routinized half-awareness.

Some of these textual infrastructures replicate the characters' own experience of the modern world: the characters of *Ulysses* too use their knowledge of Dublin's geography to understand the social texture of the city; they too use their knowledge of old stories—including local legends and literary classics—to make sense of modern life. Others, such as the chapter structure and the Homeric parallels, are added in the diegesis, either by the narrator's voice or the structure of the novel, to provide additional guidance to the reader. This layering recalls the combination of first-person and authorial perspectives in the early panoramic novel, but in modernist novels like *Ulysses* the increasing infrastructuration of the text—made possible by devices such as figural narration—interlaces the characters' perspectives much more closely with the reader's. As characters and readers rely on underlying epistemic patterns for guidance through the modern world, they also share the experience of failure that this approach entails. Both the underlying patterns and the modern world are too comprehensive to grasp as a whole, and they change continually, thus also transforming one another. Like Gatsby's green light that "year by year recedes before us," the ideal of control and understanding remains elusive as everyone needs to develop their individual interpretations of the underlying patterns and of their significance in and for the modern world.

This inherent contingency is another infrastructural dimension of modernist poetics. Eliot's variety of modernism may yearn for the systematic order of a closed world(view)—hence the fascination with fascism that Eliot shared with modernists as diverse as Marinetti, Yeats, Pound, and Jünger. Early scholars of modernism tended to project a similar "unity" on the literature,[12] but such readings were at odds with the ostentatiously fragmented, open-ended nature of modernist literature from the very beginning. The modernists' sense of epistemological instability precludes any poetics of closure. Their writings are at opposite ends of propaganda, where underlying epistemic patterns map neatly on the intra-and extradiegetic worlds the text presents. Even the political conservatives among the modernists

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11    Eliot, "*Ulysses*, Order, and Myth," 177.

12    Joseph Frank, *The Widening Gyre: Crisis and Mastery in Modern Literature* (New Brunswick: Rutgers University Press, 1963), 13.

break apart closed forms and coherent patterns in their literary works. Their texts enact an ambivalence that, as Tung-Hui Hu points out, characterizes technological infrastructure as well. Designed to preempt its own collapse, Hu argues, infrastructure is a necessarily contingent "way of translating future capacity into the present."[13] It is a planned system that aims to absorb the greatest possible extent of unplanned usage and unplannable circumstances.

Joyce, for one, envisioned a very similar kind of generative permanence for *Ulysses*. Two of his best-known statements about the novel are that if Dublin "suddenly disappeared from the earth it could be reconstructed out of my book," and that he designed the book to "keep the professors busy for centuries."[14] Both statements indicate that Joyce designed the textual infrastructure of the novel to function indefinitely by leaving it open to interpretation, that is, to usage under circumstances that elude the planner's control. As a result, this infrastructure is necessarily contingent. No individual reader, including Joyce himself, can fully understand and systematize it, as is attested by the ongoing speculations about structural elements such as the anonymous narrator of the Cyclops episode or the "man in the mackintosh" whom characters perceive at several points in the novel. By keeping the reading experience from completion, such loose ends ensure that the novel remains as epistemologically unstable as the world itself.

The infrastructural poetics of modernism thus extends beyond thematic representations of specific infrastructures. It seeks to render the epistemic shifts caused by the pervasive infrastructuration of society as a whole. For this purpose, it adopts infrastructuration as an organizing principle of the literary text, developing an increasingly complex, relational, and generative conception of how literature works and how it affects society. The ambivalent meaning of the Greek *poiesis*, which in Plato as well as Aristotle encompasses both intellectual and physical creation, points to the implications this reorganization of literature has for the *techne* of material infrastructure. By providing patterns of perception and representation attuned to the complicated infrastructure underlying the modern world, literature affects readers' attitudes toward specific infrastructures as well as the infrastructuration of society as a period-defining phenomenon. By facilitating new ideas about infrastructure—its appearance, function, and effect, its ethics and politics, and its alternatives—these epistemic patterns influence contemporaneous discourses about its construction and usage in daily life. By creating textual infrastructures, modernist literature helps create material ones.

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13    Tung-Hui Hu, "Black Boxes and Green Lights: Media, Infrastructure, and the Future at Any Cost," *English Language Notes* 55, no. 1–2 (2017): 81–88, 83.

14    James Budgen, *Joyce and the Making of* Ulysses (Bloomington: Indiana University Press, 1960), 67; Richard Ellmann, *James Joyce* (New York: Oxford University Press, 1982), 521.