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ARTICLE

The Failure of Form: Reading Liminality Computationally in Dostoevskii's *The Double*

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Abstract

This article uses computational text analysis to examine Fedor Dostoevskii's *The Double*, responding to the long-standing critical debates surrounding the text and particularly its form, which Dostoevskii saw as having failed his idea. It asserts that the problem of the ontological status of Goliadkin's double can be productively considered through an analysis of the text's use of liminality, a hallmark of romantic fantastic literature. TEI-XML encoding of liminality identified in the text enables a series of visualizations that show that liminality is primarily concentrated in interior spaces. Analyzing the visualizations, the authors argue that liminality is associated with Goliadkin's social shame, suggesting that the double is an extension of Goliadkin's psychology rather than a fantastic apparition. Using *The Double* as a case study, the authors argue that computational text analysis can extend and enrich traditional philological methods by enabling deep structural analysis of the text.

Keywords: digital humanities; Dostoevskii; literary criticism; text encoding; liminality

From its first publication, *The Double* (1846) has been among the most critically controversial of Fedor Dostoevskii's fictional works, but he viewed its central idea as one of the most ground-breaking of his literary career.[1] Looking back in *A Writer's Diary* in 1877, Dostoevskii reflected: "The novella definitely did not succeed for me *(polozhit'elno ne udalas')*; however,

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its idea was luminous, and I have never expressed a more serious idea in my work. But the form of the novella utterly failed for me *(No forma etoi povesti mne ne udalas' sovershenno)*."[2] What did Dostoevskii mean by the "failure of form" in this context? Although he asserts that the idea was "luminous," he does not elaborate on what the terms of failure might be. In 1859, when Dostoevskii was planning the republication of his early works, he discussed *The Double* in a letter to his brother Mikhail.[3] Dostoevskii writes that his "correction" of the work "will be worth a *new novel*."[4] He exults, "They will finally see what *The Double* is!" and even "challenges everyone to a fight" if they do not appreciate what he is doing.[5] Dostoevskii muses, "Why should I lose a splendid idea, the greatest type, in terms of its social importance, which I was the first to invent and of which I was the herald?"[6]

Dostoevskii's interest in the "social importance" of *The Double* reflects the contemporaneous critique that, with this work, Dostoevskii had betrayed his early promise as a social novelist. According to his critics, the novella had become mired in the fantastic, in opposition to the new literature of the 1840s grounded in the everyday. This critical response can be explained by the fact that the double is a trope associated with the romantic-fantastic tradition and so critics considered the work first and foremost as belonging to that tradition. Instead, for Dostoevsky, the fantastic was a tool which enlarged rather than foreclosed the possibilities of realist representation; the fantastic and the real were on a continuum rather than existing in opposition to one another.[7]

In this article, we use computational methods to consider the disconnect between Dostoevskii's ambitions for the novella and its ambiguous reception by the critics of his generation through analysis of his use of the liminal spaces of the fantastic. While humans read texts diachronically, from the beginning to the end within time, computers "read" them synchronically, all at once.[8] Humans read meaningfully, with intention, while computers "read" what they are given. This means that, through computational methods, deep structural patterns within a text can become legible that might be challenging for human eyes to detect.[9] Through the use of visualizations, which can translate quantitative data into forms that humans can more easily analyze, critics can come to a more sophisticated

Merrill, and Victoria Somoff. Their constructive suggestions, questions, and discussion helped to shape the final version of the article.

[2] Fedor Mikhailovich Dostoevskii, *Polnoe sobranie sochinenii v 30 tomakh*, eds. V. G. Bazanov et al., vol. 26 (Leningrad, 1972–90), 65. This and all other translations in the article are ours, unless specified.

[3] Dostoevskii, *Polnoe sobranie*, vol. 28, bk. 1, 339–41.

[4] Ibid., 340. Emphasis in original.

[5] Ibid.

[6] Ibid.

[7] Ibid., 192.

[8] See Nathan K. Hensley, "Database and the Future Anterior: Reading *The Mill on the Floss* Backwards," *Genre* 50, no. 1 (April 2017): 117–37. Hensley writes, "Search engines and tools for textual analysis encounter a text as structure. They scan an entire text or corpus or some slice of it instantly to count terms, map sequences, or graph grammatical structures. By contrast, human readers encounter a novel diachronically, river-like, along a vector that is not reversible and that builds only as this process unfolds in time" (132).

[9] Our work joins that of other scholars who use computational methods to analyze Dostoevskii's works. On the use of data visualizations for analyzing *Crime and Punishment*, see Benamí Barros Garcia, "Las aportaciones de la visualización del texto al estudio del texto literario," *Tonos Digital: Revista electrónica de estudios filológicos* 28 (January 2015): 139–72; on network analysis, see Chloë Kitzinger, "Mapping the Networks of *Crime and Punishment*," in Michael Katz and Alexander Burry, eds., *Approaches to Teaching Dostoevsky's* Crime and Punishment (New York, 2022), 158–63; on the use of Voyant Tools to understand conditional language in Dostoevskii's works, see Sarah J. Young, "Hesitation, Projection and Desire: The Fictionalizing 'as if…' in Dostoevskii's Early Works," *Modern Languages Open*, no. 1 (July 2018): 1–22, doi.org/10.3828/mlo.v0i0.183 (accessed February 18, 2025); and on the use of digital mapping as a method to understand Dostoevskii's imagined St. Petersburg, see Sarah J. Young and John Levin, "Mapping Machines: Transformations of the Petersburg Text," *Primerjalna književnost* 36, no. 2 (June 2013): 151–62.

and meaningful understanding of the relationship between categories of data.[10] Our use of computational methods ultimately relies on an interpretive framework and thus complements our own close reading to consider the nature of the fantastic on a structural level by analyzing the function of the closely related space of liminality in the text.

Liminality, a concept from anthropology, is a useful framework for considering elements within literary texts that are "betwixt and between," or which lie on the boundary between two realms. The fantastic blurs the line between the natural and the supernatural, prompting the reader to question the contours of the fictional world. This questioning is at its core a hesitation between interpretations.[11] It is a liminal mode, yet liminality is a broader and more richly productive category for Dostoevskii. In the same 1877 *Diary* entry in which he bemoans the failure of *The Double*'s form, Dostoevskii explains that he chose to use the verb *stushevat'sia* for the first time in a literary context in that work. This verb, he elaborates, means: "To disappear, to perish, to be reduced to nothing, so to speak. But it means to perish not all at once, not by being wiped off the face of the earth with crashes of thunder, but delicately, so to speak, gradually, sinking imperceptibly into nothingness. It's like a pen and ink drawing that gradually fades from black ever more lightly until it's reduced completely to nothingness."[12] The essentially liminal verb emphasizes the marginal space in which *The Double*'s protagonist exists. Dostoevskii's explanation of the verb points to the existential problem that defines *The Double.* The question at the heart of the novella is a liminal one, but it is not whether the double is supernatural, as critics have claimed, but rather what are the terms of its protagonist's selfhood. Liminality thus proves an important concept for understanding the relationship of form and content in *The Double.* To examine liminality within *The Double*, we turned to computational text analysis. We chose text encoding as a method, using the digital scholarly editing guidelines established by the Text Encoding Initiative (TEI).[13] Our text encoding enables the examination of patterns of liminality occurring across the text's narrative and the visualization of links between liminality and structure.

We argue that, while it is not surprising to find significant liminality in a work with a doppelgänger character, where that liminality appears is surprising. We assert that hesitation does not specifically demarcate the presence of the fantastic in the novella, but clusters instead around sites of social humiliation. Our textual markup exposes the porous boundaries of the real within *The Double*. Extracting the data from our encoding allows us to create visualizations that help us consider the function of liminality in the novella's structure, its relationship to plot, and its role in the disintegration of its hero's selfhood. Analyzing liminality in these terms allows us to argue, contra Vissarion Belinskii, that *The Double* is in fact a new type of social novel.

Writing Hesitation and In-Betweenness

The Double tells the story of Iakov Goliadkin, a clerk in a governmental office in St. Petersburg. As the work begins, he is recovering from a humiliating social transgression. The details and ensuing scandal are never explicitly shared with the reader, but one can

[10] See Isabel Meirelles, *Design for Information: An Introduction to the Histories, Theories, and Best Practices Behind Effective Information Visualizations* (Beverly, Mass., 2013).

[11] See Tzvetan Todorov, *The Fantastic: A Structural Approach to Literary Genre*, trans. Richard Howard (Ithaca, 1975).

[12] Dostoevskii, *Polnoe sobranie*, vol. 26, 66. The verb appears three times in *The Double*, in Chs. 4, 6, and 9.

[13] The Text Encoding Initiative (TEI) provides an internationally recognized standard for text markup with recommendations that draw from expertise in text documentation, representation, interpretation, and analysis. See James Cummings, "The Text Encoding Initiative and the Study of Literature," in Ray Siemens and Susan Schreibman eds., *A Companion to Digital Literary Studies* (Chichester, Eng., 2013), 453.

piece together a sense of what has happened. Prior to the main plot, Goliadkin has become engaged to one woman, while also courting another, Klara Olsuf′evna. He has long viewed Klara Olsuf′evna, the daughter of his superior, Olsufii Ivanovich, as his intended bride, not out of romantic love but based on her capital as a member of a higher class. He believes that marrying her will provide him with a path to progress in his career, solidifying his social status and, by extension, his selfhood. As the novella begins, the scandal of Goliadkin's simultaneous courtship and engagement has come to light, causing his social marginalization. In this context, Goliadkin meets his double. The double annoys Goliadkin by outperforming him, both socially and professionally, eventually usurping his position at work. The double also taunts Goliadkin, spreading rumors about him in their common social circles. Finally, Goliadkin's mental disintegration results in his institutionalization. Throughout the novella, ambiguity surrounds the two most crucial plot elements: the earlier scandal and the nature of the double.

The Double was published in *Notes of the Fatherland*, just two weeks after Dostoevskii's debut, *Poor Folk* (1846). *Poor Folk* had been widely acclaimed as a new benchmark of the so-called natural school; Belinskii famously hailed it as the first social novel while Nikolai Nekrasov dubbed Dostoevskii "the new Gogol′." In the context of *Poor Folk*, an epistolary novel detailing the day to day lives of two poor residents of St Petersburg, *The Double* was seen as a step back to the romantic impulses of the fantastic.[14] Belinskii's influential review set the tone for the work's subsequent reception. He praised the author's great "creative talent and depth of thought," but conceded that readers found the story "insufferably long and therefore terribly boring" and the reading public thought it "a bad novella [plokhaia povest′]."[15] This assessment is rooted in Belinskii's understanding of *The Double* as a work situated within the romantic fantastic.

Dostoevskii's contemporaries viewed the fantastic as diametrically opposed to realism. For them, fantastic elements, like the appearance of a doppelgänger, could only be attributed to mental illness in a realist setting. Belinskii observed in 1846 that, "The fantastic in our time can have a place only in madhouses and not in literature, and it falls under the purview of doctors, not of writers."[16] He and other critics, among them Nikolai Dobroliubov, Pavel Annenkov, and Apollon Grigor′ev, put forward the idea that Goliadkin's madness was the main idea of the novella.[17] Grigor′ev, for example, wrote in a review that: "*The Double* ... is a pathological work, therapeutic, but in no way literary: it is the story of madness, overanalyzed, it is true, to the extreme, but nonetheless revolting, like a corpse ... Dostoevskii has so mired himself in analysis of the life of the *chinovnik* that boring, impertinent reality begins to take on the form of delirium very close to insanity."[18] For these critics, the inclusion of the fantastic doppelgänger constitutes the work's representation of Goliadkin's madness. As such, it forestalls the kind of social criticism that, for them, characterized *Poor Folk*. However, Dostoevskii's own understanding of social realism necessitated

[14] Vissarion Grigorovich Belinskii, *Polnoe sobranie sochinenii v 13 tomakh*, ed. N. F. Bel′chikov et al., vol. 9, Stat′i i retsenzii, 1845–1846 (Moscow, 1955), 565; and Nikolai A. Dobroliubov, *Polnoe sobranie sochinenii v 9 tomakh*, ed. B. I. Bursov et al., vol. 7 (Leningrad, 1961–64), 258. Vladimir Zakharov argues that Belinskii's interpretation derives from a misreading, in which the letters imagined by a paranoid Goliadkin actually exist, having been written by the malicious double, and that Dobroliubov's interpretation overemphasizes the role of the fantastic. See Vladimir Zakharov, "Genial′nyi 'Dvoinik': pochemu kritiki ne ponimaiut Dostoevskogo?," *Neizvestnyi Dostoevkii* 7, no. 3 (September 2020): 33–34.

[15] Belinskii, *Polnoe sobranie*, vol. 9, 563–64, 566.

[16] Belinskii, *Polnoe sobranie*, vol. 10, Stat′i i retsenzii, 1846–1848, 213.

[17] Belinskii asserts that one of the work's strong points is that "not every reader will be able to guess quickly the conceit that Goliadkin is mad" (*Polnoe sobranie*, vol. 9, 565).

[18] See Dostoevskii, *Polnoe sobranie*, vol. 1, 491.

the depiction of both the outer, material world, and the potentially irrational, interior one. In *Poor Folk*, the epistolary genre enabled the representation of interiority, but in *The Double*, Dostoevskii tried a new approach. The fantastic, in this sense, can be seen as one of many genres that Dostoevskii deployed in the service of representing reality over the course of his career.

In an 1880 letter to fellow writer Iurii Abaza, Dostoevskii praises Aleksandr Pushkin's story, "The Queen of Spades" (1834) as "the pinnacle of the art of the fantastic."[19] He writes, "You believe that Germann really did have a vision that perfectly aligns with his worldview, but, meanwhile, at the end of the story, when you have finished reading it, you do not know how to decide: did this vision emerge from Germann's nature, or is he actually one of those persons who is connected to another world, one of those evil spirits, destructive to mankind."[20] Dostoevskii asserts, "the fantastic must verge on the real such that you *almost* believe in it."[21] His analysis of Pushkin's use of the fantastic closely aligns with Tzvetan Todorov's definition *avant la lettre*.[22]

Todorov theorized the standard critical definition of the fantastic as the hesitation between choosing to understand an extraordinary phenomenon occurring within the text as real or illusory.[23] He writes: "once we choose one answer over the other, we leave the fantastic for a neighboring genre, the uncanny or the marvelous. The fantastic is that hesitation experienced by a person who knows only the laws of nature, confronting an apparently supernatural event."[24] Todorov's theory, while drawing on analysis of early nineteenth-century texts, differs from the understanding of the fantastic as an expression of madness articulated by Dostoevskii's critics, but aligns with Dostoevskii's own working understanding of the concept.

In *The Double*, Dostoevskii experiments with this understanding of the fantastic in the context of literary realism. Claire Whitehead argues that his novella is constructed on the principle of hesitation between natural and supernatural explanations for the appearance of the doppelgänger.[25] She shows that the instability of the novella's narrative perspective foregrounds that hesitation from the opening chapter. What at first seems like a heterodiegetic narrator is destabilized through free indirect discourse and frequent focalizations of Goliadkin's perspective, which is characterized by linguistic and psychological breakdown, as well as through the periodic withholding from the reader of significant contextual information, thus causing us to mistrust the narrator's explanations. Ch. 5, in which the double appears, is, as Whitehead observes, the chapter with the most serious narrative lacunae, which means that we do not get a proper glimpse of the double and are not able to gauge whether he is a figment of Goliadkin's imagination or a manifestation of the supernatural. The narrator tells us at the end of that chapter that Goliadkin sees his double, but, as Whitehead points out, "Doubles or doppelgängers should not exist in rationally ordered fictional worlds where human beings are original creations.

[19] Dostoevskii, *Polnoe sobranie*, vol. 30, bk. 1, 192.

[20] Ibid.

[21] Ibid.

[22] Claire Whitehead has even suggested that "transposing Todorov's definitions and categories onto Dostoevskii's comment[s] ... would lead to a classification of Pushkin's story as the 'fantastique-pur.'" See Claire Whitehead, *The Fantastic in France and Russia in the Nineteenth Century: In Pursuit of Hesitation* (London, 2006), 15.

[23] Todorov argues that the fantastic requires that three conditions be fulfilled: first, the text must require the reader to consider the diegetic world as real and therefore cause her to hesitate between a natural and a supernatural explanation of the events. Second, this hesitation may be channeled through a character, so the character's hesitation stands in for that of the reader. Furthermore, that hesitation is both represented and thematized. Third, the reader must reject both allegorical and poetic interpretations of the text. See Todorov, *The Fantastic,* 33.

[24] Todorov, *The Fantastic,* 25.

[25] See Whitehead, *Fantastic in France and Russia,* 78–119.

If it could be definitively established that Goliadkin actually has such a double, hesitation could be resolved and Dostoevskii's novella would be classified as an example of the 'marvelous.'"[26]

The hesitation Todorov identifies as the hallmark of the fantastic is thus maintained and is central to the hermeneutic ambiguities present in Dostoevskii's text.[27] Hesitation creates textually open moments in which potentiality is primary. It is in this more capacious sense that we conceptualize hesitation in this article.

Hesitation in this sense relates to Mikhail Bakhtin's concept of the *threshold* chronotope. Todorov theorizes that, in the realm of the fantastic, hesitation is at its core marked by indecision. At the moment of hesitation, the reader is situated on the threshold between the fantastic and another genre, one in which hesitation has given way to the parameters defining how the world functions within that genre. Similarly, the character experiencing the hesitation of the fantastic is on the threshold between one explanatory system and another, between the natural and the supernatural. The character in this situation finds themselves within the chronotope of the *threshold*, which Bakhtin defines as one "of *crisis* and *break* in a life."[28] He further characterizes the threshold as "the decision that changes a life (or the indecisiveness that fails to change a life, the fear to step over the threshold)."[29] Accordingly, the appearance of the doppelgänger in *The Double* not only prompts uncertainty in the reader, but also plunges Goliadkin into a full-blown existential crisis, which then plays out in the remaining chapters.

Bakhtin's conceptualization of the threshold chronotope is one way of understanding the connection between genre, narrative, and psychology. Dostoevskii's contemporaries interpreted Goliadkin's threshold crisis largely in clinical terms, deeming the character "mad" and arguing that the genre of *The Double* distorts "impertinent reality" into "delirium very close to insanity."[30] Dostoevskii's interest in the story of Goliadkin and his double was no doubt related to its psychological ramifications, but his integration of the psychological in *The Double* is inseparably connected to the novella's generic hybridity. Considering Bakhtin's concept in the context of *The Double*, Malcolm Jones observes:

> The conception of the double enabled Dostoyevsky to explore psychological threshold situations: the thresholds between wakefulness and dreaming, the conscious and the unconscious, reality and fantasy, sanity and madness, self-confidence and the abyss, stability and instability, where the personality is most vulnerable to the breakdown of certainties about itself and the world. But most importantly it also enabled him to explore the slippage between signifier and signified and between sign and referent.[31]

Within the text of *The Double*, these psychological threshold situations are delineated in liminal terms. Indeed, liminality is closely aligned with the decisive moment of hesitation in the text.

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[26] Whitehead, *Fantastic in France and Russia*, 109.

[27] As Todorov points out, within his scheme, most of Dostoevskii's other novels can be seen in terms of what he terms the uncanny, meaning that the supernatural elements are explained.

[28] Mikhail Bakhtin, "Forms of Time and Chronotope in the Novel," in Michael Holquist, ed., *The Dialogic Imagination: Four Essays by M.M. Bakhtin*, trans. Caryl Emerson and Michael Holquist (Austin, 1981), 248. Emphasis in original.

[29] Ibid.

[30] See Belinskii, *Polnoe sobranie*, vol. 9, 565; and Dostoevskii, *Polnoe sobranie*, vol. 1, 491.

[31] Malcolm V. Jones, *Dostoyevsky after Bakhtin: Readings in Dostoyevsky's Fantastic Realism* (Cambridge, Eng., 1990), 56.

Theorizing Liminality

The critical concept of liminality finds its origins in the work of ethnographer Arnold van Gennep, who first theorized the notion of rites of passage, or the transition of individuals from one group within society to another.[32] The term "liminality" stems from *limen*, the Latin root meaning "threshold." The liminal condition is the phase when the individual has left one stage but not yet entered another, a state of being in-between socially defined structures such as childhood or adulthood. Subsequent social theorists, in particular cultural anthropologist Victor Turner, have seen rites of passage as universally significant and have recognized ontological value in the concept of liminality.[33] For Bjørn Thomassen, liminality is a fundamental condition of modernity, and, in Turner's famous formulation, *the betwixt and between* that it describes can be conceived both temporally and spatially.[34] Those in a liminal position are set against the existing social order and apart from any commonly accepted social rules. The goal is either to forge a new identity, or to find common bonds with society on new terms. The liminal state enables the possibility of change.

Liminality has become a productive concept for considering elements that exist between two states in literature and film since its reconceptualization by critics in the later twentieth century.[35] Following Thomassen, Hazel Andrews and Les Roberts have observed that liminality connotes "a boundary, border, a transitional *landscape*, or a doorway ... of a physical as well as psychic space of potentiality."[36] From its anthropological genesis, liminality also denotes the middle stage of a transitional process, and, in this sense, connotes duration. Liminality is thus "a generative act, a psychosocial intentionality of being."[37] Bakhtin's theorization of the threshold chronotope aligns closely with the concept of liminality in literature. He identifies liminal spaces in Dostoevskii's work, "For example, the threshold and related chronotopes–those of the staircase, the front hall and corridor, as well as the chronotopes of the street and square that extend those spaces into the open air," as "the main places of action in his works, places where crisis events occur, the falls, resurrections, renewals, epiphanies, decisions that determine the whole life of a [hu]man."[38]

Writing liminality into a text is a method for incorporating ambiguity around the status of people, places, and events. This ambiguity creates a moment of hesitation in the reader, analogous to that in Todorov's theory. The question of ontology thus becomes a

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[32] Arnold Van Gennep, *The Rites of Passage: A Classical Study of Cultural Celebrations*, trans. Monika B. Vizedom and Gabrielle L. Caffee (Chicago, 1960 [1909]). Van Gennep devised the metaphor of social existence resembling a house divided into different rooms and corridors, with the individual belonging to a particular group for a while before transitioning into another group through a corridor or passage.

[33] See Victor Turner, "Liminal to Liminoid, in Play, Flow, and Ritual: An Essay in Comparative Symbology," *Rice Institute Pamphlet—Rice University Studies* 60, no. 3 (Summer 1974): 53–92; and Bjørn Thomassen, *Liminality and the Modern: Living Through the In-Between* (Abingdon, Eng., 2014), 78–79.

[34] See Thomassen, *Liminality and the Modern*, 91–92. In Thomassen's words, "they become nameless, timeless and socially 'unstructured,' existing in a floating state of being, even as they acquire throughout the liminal period the necessary knowledge and experience in order that their transformed beings may eventually re-enter society and take up their new roles, which are recognized and stamped onto them in the re-aggregation ritual" (92). Such a condition is profoundly paradoxical and its risks are clear: "at the level of the individual, it is the destruction of identity, while at the level of society it involves the suspension of the structure of social order" (92).

[35] On liminality as a critical concept, see Sandór Klapcsik, *Liminality in Fantastic Fiction: A Poststructuralist Approach* (Jefferson, NC, 2012), 7–19.

[36] Hazel Andrews and Les Roberts, "Introduction: Remapping Liminality," in Andrews and Roberts eds., *Liminal Landscapes: Travel, Experiences and Spaces In-Between* (Abingdon, Eng., 2012), 1.

[37] Andrews and Roberts, "Introduction: Remapping Liminality," in Andrews and Roberts eds., *Liminal Landscapes*, 1.

[38] Bakhtin, "Forms of Time and Chronotope in the Novel," in Holquist, ed., *Dialogic Imagination*, 248.

question of liminality. Within literary studies, the adjective "liminal" can be applied to characters, places, and other elements to denote their transitive nature, while keeping in mind the important point that "one cannot occupy an in-between space or exist (in-)between two binary states without a resultant tension and/or mobility between both elements of the binary, which resist but also merge with the middle in-between."[39] The tension—and power—of the liminal is that it draws from both sides of the binary that it connects as well as divides.

Within criticism, the idea of the Dostoevskian protagonist as existing "on the edge" or "in the abyss" is repeatedly invoked. For example, Ilya Kasavin and Nadezhda Kasavina assert that "Dostoevsky's man is always found on the painful border between himself and the world, which lies across his consciousness with its terrifying inauthenticity."[40] They argue that Goliadkin's consciousness and its expression are characterized by a split between Goliadkin's interior world and that of the society to which he belongs. This split is represented on the level of discourse as Goliadkin directs his utterances towards himself, rather than towards interlocutors or the social world, and recreates a new discursive position for himself.[41] This new position results in a rupture that is manifested in the appearance of the double and the existence of one Goliadkin who fails in his social, professional, and worldly responsibilities and another who succeeds. The Kasavins' analysis of *The Double* can be even more productive if we think about Goliadkin in terms of liminality.

Liminality in *The Double*

The Double begins with Goliadkin in a state of liminality, on the boundary between sleep and wakefulness.[42] It ends with him in the liminal space of his superior's reception room from where he is dragged to an asylum by a series of figures who exist on the boundary of reality and his imagination. The state of liminality within which Goliadkin exists in the text can be found everywhere and across a variety of different conceptual planes. The novella's action takes place largely within liminal spaces such as courtyards, staircases, anterooms, and corners (Bakhtin's threshold spaces). Much of the action takes place at liminal times such as dusk or midnight. Goliadkin's position on the margins of society is represented through the liminal spaces he inhabits, but also the sense of corporeal liminality which the narrator imparts to him, a sense that he does not quite fit into his own body. Of course, this sense is then subsequently concretized by the appearance of the double, who inhabits an identical body.

Liminality is also connected to Goliadkin's own self-image. As his sense of self begins to dissolve following the appearance of his double, he finds himself increasingly marginalized. The margins of social interaction are delineated in liminal terms. The axiomatic example of this liminalization in the text occurs in Ch. 4 as Goliadkin attempts to gain entry to Klara Olsuf'evna's name day party and is pushed by his own social anxieties and shame from the center of the room to the threshold, then the vestibule, the staircase, and the courtyard. Fleeing the party, Goliadkin is described by the narrator as "murdered, completely

[39] Dara Downey, Ian Kinane, and Elizabeth Parker, "Introduction: Locating Liminality: Space, Place, and the In-Between," in *Landscapes of Liminality: Between Space and Place*, eds. Downey, Kinane, and Parker (Lanham, MD, 2016), 6.

[40] Ilya Kasavin and Nadezhda Kasavina, "The Split Existence: (An Analysis of F. M. Dostoevsky's *The Double*)," trans. Brad Damaré, *Russian Studies in Philosophy* 60, no. 1 (July 2022): 74.

[41] Kasavin and Kasavina, "The Split Existence," 78–79.

[42] Our analysis of *The Double* exclusively looks at the 1866 revised edition. It would be interesting to extend our analysis to a comparison with the text of the 1846 edition, but that work lies beyond the scope of this article. See Zakharov, "Genial'nyi 'Dvoinik,'" for more information about the differences between the two editions.

murdered, murdered in the fullest sense of the word."[43] Discussing this moment, Jones observes that Goliadkin "feels the physical abyss of the staircase looming up together with the spiritual abyss of total annihilation."[44] This mode of mapping spatial liminality onto ontological doubts can be found throughout *The Double.*

Social gatherings are frequently the space in Dostoevskii's *oeuvre* where shame is both realized and reiterated. Deborah Martinsen has shown that shame is central to the psychological dimension of Dostoevskii's characters: "Shame lies on the boundary between self and other and is thus intimately linked to the question of identity. Its boundary status also explains shame's great importance for forming and policing personal and social identity and thus its importance for psychological and social studies."[45] Here Martinsen describes shame in liminal terms. It is exposed in social interactions, which is one of the reasons why the double's manifestation is such a source of terror. When he is first introduced, the double is described in relation to Goliadkin: "The one who now sat across from Mr. Goliadkin was the horror of Mr. Goliadkin, was the shame of Mr. Goliadkin ... in one word, it was Mr. Goliadkin himself [*byl sam gospodin Goliadkin*]."[46] The double being identified as Goliadkin's shame at this crucial moment emphasizes his connection with social humiliation. He ingratiates himself in Goliadkin's office, displacing him and earning praise from his superiors. Although workplace interactions are a major source of humiliation for Goliadkin, after the appearance of the double every social interaction becomes fraught with the potential for danger. For example, when Goliadkin orders one fish pie in a restaurant, the double appears to taunt him and he realizes he has committed a *faux pas* by eating eleven pies and not paying for them.

In this scene, Goliadkin doubts himself when confronted by the server's assertion that he has eaten eleven pies: "Well, if it's eleven, it's eleven ... well, a man's hungry, so he eats eleven little pies; well, let him eat and enjoy it; well, there's nothing to wonder at and nothing to laugh at."[47] Then he suddenly sees, facing him, behind the server's back, the figure of the double. The double is standing in a liminal space, a doorway, eating the remains of the tenth pie. Goliadkin's feeling of shame is exacerbated by the public exposure of his supposed greed, which is not real and yet, also, must be real. The shame takes place on the threshold, metaphysically for Goliadkin and physically for the double. Throughout the text, Goliadkin's identity is inseparably tied to that of his double through naming, for example, in the phrases "Goliadkin Junior" or "Mr. Goliadkin's nightmare."[48] In this scene, however, when Goliadkin recognizes the double, the two for a moment merge through naming: "[there] stood a little man—stood he—stood Mr. Goliadkin himself—not the old Mr. Goliadkin, not the hero of our story, not the old Mr. Goliadkin, but the new Mr. Goliadkin."[49] When the narrator says, "stood Mr. Goliadkin himself," it is not clear whether he refers to the original Goliadkin reflected in a mirror or the double in the doorway. In the subsequent clause, this existential dilemma is resolved.

Continuing the scene, the narrator observes, "He smiled at Mr. Goliadkin the First, nodded his head at him, winked, minced slightly with his feet, and looked as if he was about to disappear [*tak on i stushuetsia*], slip out into the next room, and that would be that ...

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[43] Dostoevskii, *Polnoe sobranie*, vol. 1, 138.

[44] Jones, *Dostoyevsky after Bakhtin*, 44.

[45] Deborah Martinsen, *Surprised by Shame: Dostoevsky's Liars and Narrative Exposure* (Columbus, 2003), xiii.

[46] Dostoevskii, *Polnoe sobranie*, vol. 1, 146.

[47] Dostoevskii, *Polnoe sobranie*, vol. 1, 173.

[48] See Elena Vasileva, "Names and the Double's Existence," *Digital Dostoevsky: A blog chronicling the Digital Dostoevsky project*. May 8, 2022, at digitaldostoevsky.com/2022/05/08/names-and-the-doubles-existence/ (accessed on February 18, 2025).

[49] Dostoevskii, *Polnoe sobranie*, vol. 1, 174.

all pursuit would be in vain."[50] This essentially liminal verb (to disappear, *stushevat'sia*) is accompanied by markers of spatial liminality, the double's materialization on the edge, and his potential disappearance out of the back door. Goliadkin fears that the double has "supplanted me, the scoundrel" and is described as "flaring up like fire from shame."[51] He quickly pays for all the pies in a failed attempt to forestall the server's judgement. This passage invokes a quintessential moment of hesitation both for Goliadkin and the reader, opening up the question of the double's existence in the social space of the restaurant, where the server functions as the witness to Goliadkin's shame. Our goal, in marking up the text, was to find out how such moments map onto a broader landscape of textual ambiguity, to come to a better understanding of the necessary textual preconditions for these moments of hesitation.

This landscape of ambiguity is of such complexity that it challenges the limitations of human reading. This is where computational text analysis can help. Because computers do not parse texts with the intent to find meaning, they can find dense networks of verbal signs that the human mind, which seeks meaning, might not recognize.[52] Thus, computational text analysis allows us to map the landscape of liminality and visualize it in connection with other structural elements such as plot, location, and chronology. In order to do this work, we need to make the text computer readable. This means not only marking up its basic structural elements but also deciding on a process of how to identify and encode liminality in the narrative.

Encoding Liminality in *The Double*

To prepare *The Double* for analysis, we encoded it: we used tags around its elements to convey information about those elements using Extensible Markup Language (XML).[53] XML is a markup language that works together with the TEI *Guidelines* to enable encoding of specific elements (such as words, phrases, or formal structures).[54]

As the snippet of TEI-XML from our encoded file of *The Double* shows (Figure 1), we indicate the beginning of the chapter with a numbered tag. The text's header, "Chapter I," is set off with <head></head> tags. The new paragraph starts with a <p> tag. Goliadkin's name is encoded as a character reference using <persName>. The "ref" attribute within the <persName> tag includes "#gol," a reference that always indicates Goliadkin's appearance in the text. Within our encoded text, each character and place has a unique reference. Inside <persName></persname>, separate tags identify Goliadkin's forename, patronymic, and surname. The TEI *Guidelines* include syntax suggestions and coding conventions for many kinds of texts. Together this framework and language create a

[50] Ibid.

[51] Ibid.

[52] See Hensley, "Database and the Future Anterior," 132.

[53] The encoded edition of *The Double* used for this article was created by a team consisting of Braxton Boyer, Veronika Sizova, and Elena Vasileva, as well as the authors. Boyer, Vasileva, and the authors collaborated equally on encoding the novella for formal elements, names, places, and speech. We four regularly met to discuss our process and, upon completing the encoding, went back and checked each other's encoding for consistency. The authors then encoded the text with <seg> tags to reflect liminal language for the purposes of the present research. Sizova did a final encoding check of the file. The file's TEI header provides a full account of the work done on the file across all stages of its encoding. Our TEI edition of *The Double* can be found at github.com/Digital-Dostoevsky/dvoinik-liminality (accessed on February 18, 2025).

[54] See TEI Consortium, *TEI: Guidelines for Electronic Text Encoding and Interchange version 4.9.0,* January 24, 2025, https://tei-c.org/release/doc/tei-p5-doc/en/html/index.html (accessed on Feb 18, 2025). Our TEI edition of *The Double* was encoded using version 4.6.0 (April 4, 2023).

```
<div2 type="chapter" n="1">
        <head>Глава I</head>
<p>Было без малого восемь часов утра, когда титулярный советник <persName
ref="#gol"><forename>Яков</forename> <addName
type="patronymic">Петрович</addName>
<surname>Голядкин</surname></persName> очнулся после долгого сна, зевнул, потянулся
и открыл наконец совершенно глаза свои.
```

Figure 1. The opening of *The Double* encoded with TEI-XML. This excerpt is from our TEI edition of *The Double*. It, like Figures 2–8, can be found at: https://github.com/Digital-Dostoevsky/dvoinik-liminality.

```
<persName ref="#gol"><forename>Яков</forename>
<surname>Голядкин</surname></persName>

<persName ref="#gol"><forename>Яков</forename> <addName
type="patronymic">Петрович</addName></persName>

<persName ref="#gol"><roleName>Господин</roleName>
<surname>Голядкин</surname></persName>
```

Figure 2. Three names encoded in TEI-XML using the <persName> tag. The encoded names refer to "Iakov Goliadkin," "Iakov Petrovich," and "Mr. Goliadkin," respectively. This excerpt is from our TEI edition of *The Double*.

system for text encoding that allows the computer to recognize both formal text structures (such as chapter breaks and paragraphs) and elements within the text (such as speech, characters, and places).

Encoding *The Double* was a multi-stage process. First, we indicated the formal structures of the text by placing tags such as <div2></div2> and around them. Second, we marked each instance of a named place or character in the text by surrounding it with an identifying tag. For example, the three <persName> encoded names refer to "Iakov Goliadkin," "Iakov Petrovich," and "Mr. Goliadkin," respectively (Figure 2). The #gol reference included in each <persName> tag enables the computer to register each mention of a character, even if that character appears under multiple names, a fact which is clear to the reader. Third, we designated speech and added specific details for each utterance. In the example shown in Figure 3, Goliadkin asks his servant, Petrushka, "Well, and the carriage?" Petrushka responds, "The carriage has arrived."[55] Each utterance is encoded with a <said> tag, which includes attributes providing information about that utterance: speaker, addressee, whether it was direct, and whether it was said aloud. The act of speech tagging is partially interpretive in that we infer from punctuation, grammar, and context the speaker, audience, whether the speech is direct or indirect, and whether the speech is aloud or silent. Finally, we categorized instances of liminality in the text, which we discuss in detail below. This stage of encoding was done in order to address our research question about the appearance and frequency of liminality in the text.

Liminality tagging is an interpretive act. Together we discussed examples of liminal spaces in order to have a clear mutual understanding of what constitutes liminality for the purposes of our analysis. We devised categories to differentiate between the types of liminality that we identified in the text. We decided to categorize liminality in order

[55] Dostoevskii, *Polnoe sobranie*, vol. 1, 111.

```
<p>— <said aloud="true" who="#gol" direct="true" toWhom="#pet">Ну, а карета?
</said></p>
<p>— <said aloud="true" who="#pet" direct="true" toWhom="#gol">И карета
приехала.</said></p>
```

Figure 3. An example of a TEI-XML encoded conversation. This excerpt is from our TEI edition of *The Double*.

```
<seg type="temporal" subtype="izm">ровно полночь</seg>
```

Figure 4. An example of a TEI-XML encoded instance of liminality. This excerpt is from our TEI edition of *The Double*.

to represent the variety of discursive strategies around liminality in *The Double* using TEI-XML encoding. What is important here is not the choice of categories, but rather their range. Obvious examples of liminality were physical spaces that closely align with Bakhtin's threshold spaces, such as staircases, bridges, and doorways. Others required more discussion. One of the most frequent types of liminality to appear in the text is what we have called "state" liminality. This is a narrative expression of a state of being that carries a liminal quality, similar to that described by Dostoevskii in his definition of the verb "stushevat′sia." An example of this type of liminality is when, after an embarrassing social encounter, Goliadkin wishes to "fall through the earth or hide in a mousehole."[56]

Conventions for marking chapter headings, characters, places, and speech are included in the TEI *Guidelines*, but encoding liminality is beyond their scope. This limitation, however, presented an opportunity for a creative solution. To signal liminality in the text, we used a tag called "segment" (<seg>). This tag is not tied to a specific known element (like places or speech) and can be adapted to a researcher's specific needs. Our use of <seg> to mark liminal moments in the text made use of its two attribute categories (type and subtype) to encode information about each liminal moment, namely the liminal category and the location connected to this moment. For example, in Ch. 5, the city's bells ring to mark midnight.[57] In our encoding (Figure 4), "the stroke of midnight" is set off by <seg></seg> tags denoting that this is an expression of liminality. Midnight is liminal because it is simultaneously the end of one day and the beginning of the next. We have used the type attribute to designate the liminal category, "temporal." The subtype attribute encodes the location, "izm," a reference to the Izmailovskii Bridge. Indicating liminality in this way "bundles" location together with category and enables a more spatially-inflected understanding of its function in the text. Creating our encoded text file frequently required interpretive decisions and forced us to do incredibly close reading of *The Double*.

After encoding liminality using <seg> tags, we extracted the value of selected XML elements to a tab-separated value format (TSV) using XML Query Language (XQuery) and Extensible Stylesheet Language Transformations (XSLT). In order to visualize the frequency

[56] Ibid., 127.
[57] Ibid., 138.

of words indicating liminality across the novella, we chose to extract chapter number in addition to the <seg> attributes. The result is a text file in which each line represents a single instance of liminality in *The Double.* The TSV file isolates the text we identified as liminal in *The Double* while preserving its attachment to the additional information we encoded into our mark up. The values attributed to each instance of liminality were separated by tabs on that same line, creating distinct columns for chapter, liminal category, location, and the text of the novella set off by the <seg> tags.

Data Visualization and Analysis

Confronted with a TSV file populated by distinct examples and their metadata, data visualization offers scholars a means to observe and comprehend deeper trends, anomalies, and patterns. In order to visualize our extracted elements in relation to one another, we turned to Tableau, a visual analytics platform that supports the manipulation of data into a variety of relational patterns. When we imported the TSV file into Tableau, we were able to experiment with different visualization types that use the column values from our text file (chapter, liminal category, location name) to represent how liminality functions in the text, both spatially and narratively.[58]

First, we examined the density of liminality in each chapter using a treemap (Figure 5). Treemaps display tree-structured (hierarchical) data as a set of nested rectangles, each representing one branch of the data tree. In Figure 5, each chapter of *The Double* is a branch, and each branch's dimensions and color are determined by the number of <seg> tags denoting liminal moments in that chapter relative to the number in the other chapters. The visualization takes into account the different lengths of chapters. The darker the color of each branch, the more <seg> tags denoting liminality are present in the corresponding chapter, adjusted for length.

Figure 5 shows that Ch. 5, in which the double appears, is the most liminally marked within the novella, followed by Chs. 1 and 3. Chapters in which the double appears, such as 9–13, are marked with liminality, but not to the same extent. These chapters present the double as a doppelgänger type. The high level of liminality we have identified in them shows both Goliadkin's and the reader's hesitation when confronted with a potentially supernatural event. Yet, in Chs. 6 and 7, in which Goliadkin interacts the most with his double, meeting him at the office and then hosting him in his apartment, we have identified fewer instances of liminality. Although these chapters describe significant episodes featuring the double, there is little hesitation because when Goliadkin is interacting with him one on one, the former is not questioning the latter's ontological status. Figure 5 shows that these chapters are two of the least liminally marked. Ch. 7 in fact has one of the smallest numbers of <seg> tags denoting liminality. Our treemap reveals that Chs. 1, 3, and 4, which precede the double's appearance but document a series of Goliadkin's social failures, carry more liminality than Chs. 6 and 7. Thus, Figure 5 demonstrates that liminality and hesitation in the narrative are not solely connected to the appearance of the double.

Next, we examined the proximity of liminality to location using a series of horizontal bars arranged in order from most to least frequent (Figure 6). As outlined above, each instance we identified as liminality in our encoded edition of *The Double* is tagged with its category and location. Figure 6 counts the total number of <seg> tags denoting liminality associated with sixteen different locations and sorts them to create a representation of the locations in relation to one another. This figure shows that the location with the most instances of identified liminality is Goliadkin's superior Olsufii Ivanovich's house,

[58] Our Tableau workspace is available at github.com/Digital-Dostoevsky/dvoinik-liminality (accessed on February 18, 2025).

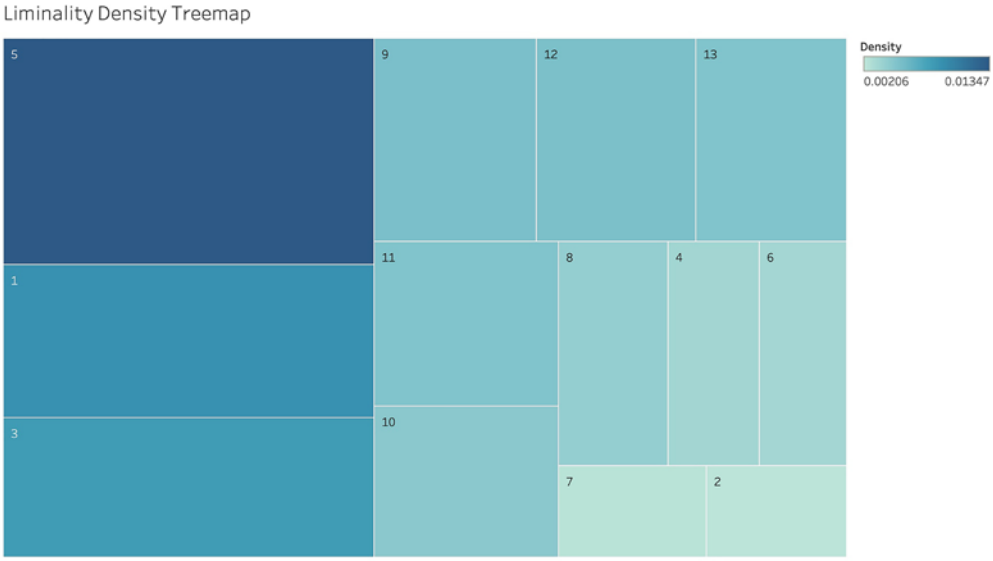

Figure 5. Treemap. Each numbered rectangle represents a chapter. The color shows the count of <seg> tags denoting liminality in that chapter adjusted for length, from lighter colors representing fewer to darker colors representing more. Each rectangle's size shows the count of <seg> tags in the chapter, adjusted for length, relative to each other chapter, with smaller rectangles representing fewer and larger rectangles representing more. This figure was created by us in Tableau using data from our encoded corpus. Our Tableau workbook and data are available at the TEI edition of *The Double*.

with 61. Second and third, respectively, are Goliadkin's apartment and his office. All three are interior spaces, part of Dostoevskii's imagined geography, rather than recognizable landmarks. Of the top 8 locations with the greatest concentrations of liminality, only the Fontanka Embankment and Nevskii Prospekt fall into this latter category; the rest are interior spaces. Although the Petersburg topography with its canals, bridges, and courtyards creates a liminal backdrop, our analysis reveals that imagined interior spaces incubate the text's liminality in the most significant way. Furthermore, the concentration of liminality in the top three locations is such that the next, the Fontanka Embankment, only has 14 instances, compared to Goliadkin's office, with 47. The interior locations marked significantly with liminality are associated predominantly with Goliadkin's social anxiety. Olsufii Ivanovich's house outranks other locations because it is the site of Goliadkin's most significant social humiliations, Klara Olsuf'evna's party in Ch. 4 and his institutionalization in Ch. 13.

Chapter 10 demonstrates how liminality works in relation to space within the text. It begins with a prolonged scene set in the apartment, where Goliadkin has nightmares about the double taking his place, then moves to the office, where the double spreads gossip about him. If liminality were tied to the double's ontological status, we would expect an even distribution of <seg> tags across both locations in the chapter. However, the <seg> tags here intriguingly cluster around the office, with 27 instances, relative to just one in the apartment. This imbalance can be explained if we consider the social context of these interactions. The nightmares document social humiliation, but it unfolds within Goliadkin's interiority as the double's actions impact him only. His humiliation requires two conditions: it needs to be publicly witnessed, but must also be privately felt. In the office both conditions

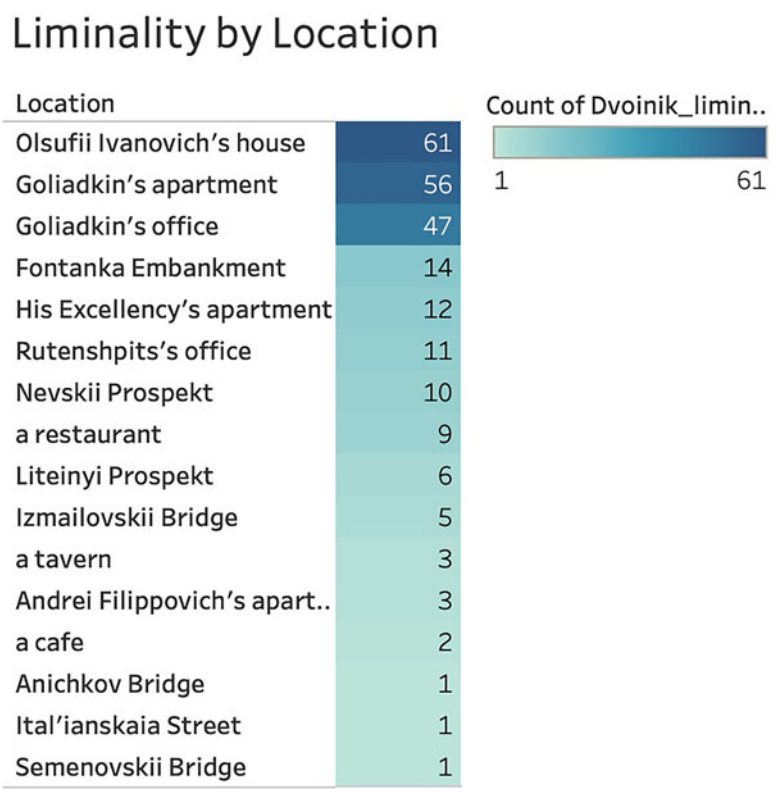

Figure 6. Horizontal bars. Count of <seg> tags denoting liminality broken down by location. The darker colored bars correspond to higher incidences of <seg> tags at that location. Categories of liminality are not considered here. This figure was created by us in Tableau using data from our encoded corpus. Our Tableau workbook and data are available at the TEI edition of *The Double*.

are present; the double's actions here actively bring Goliadkin's private shame into public circulation.

The placement of Goliadkin's apartment in Figure 6 also supports this reading. It is the space where he spends the most extended time with the double, so we would expect a significant number of <seg> tags here if liminality was solely tied to the ontological status of the double. Yet, from Figure 5, we know that Chs. 1 and 9, which are substantively set in Goliadkin's apartment, include more <seg> tags identifying liminality, although the double is not present. However, Petrushka's presence may explain this. He and Goliadkin have a complicated relationship, which reverses the usual employer-employee dynamic, echoing that of Chichikov and his servant, Petrushka, in Nikolai Gogol''s *Dead Souls* (1842). In *The Double*, Petrushka constantly shows his contempt for Goliadkin, who feels it keenly. This is seen in the following interaction: "'Where to?' Petrushka, who had probably got fed up with traipsing around in the cold, asked rather sternly ... meeting his employer's terrible, annihilating [*vseunichtozhaiushchii*] look, with which our hero had twice armed himself [*obespechival sebia*] already that morning ..." [59] Goliadkin's insecurities about Petrushka's respect for him come to light as he reads disrespect into this interaction, which is brusque, but perhaps understandably so considering the cold weather. Their loaded power relations are expressed in Goliadkin's "annihilating" look, which carries his response

[59] Dostoevskii, *Polnoe sobranie*, vol. 1, 125.

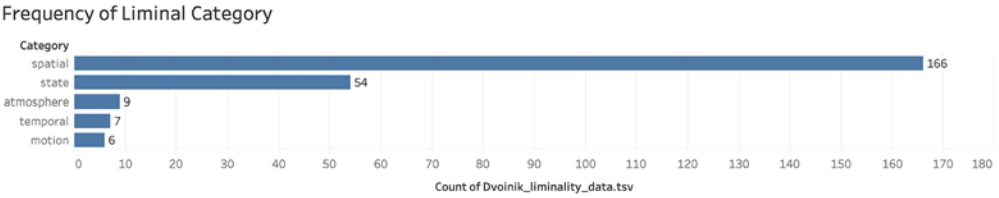

Figure 7. Horizontal bars. Count of instances of each category of liminality in the novella. This figure was created by us in Tableau using data from our encoded corpus. Our Tableau workbook and data are available at the TEI edition of *The Double*.

to Petrushka's anticipated attack.[60] Thus, Petrushka's presence brings social humiliation into the private space of Goliadkin's apartment, rendering it semi-public. The significant amount of identified liminality in the private space of the apartment at first seems surprising, but Petrushka's presence as both witness to Goliadkin's humiliation and provocateur explains it.

In the context of St. Petersburg, symbolically established spatial markers of liminality are external: bridges and embankments, including the site where the double first appears.[61] Yet, in our analysis they appear less significant than interior sites: Olsufii Ivanovich's apartment, the site of Goliadkin's greatest social humiliations; Goliadkin's apartment, the site of the collapse of his interiority; and Goliadkin's office, the site of his professional humiliation. As the relationship between liminality and location shows, sites that are notable as loci of Goliadkin's humiliation and resulting inner collapse carry more identified liminality than those connected explicitly with the double's appearance and antics.

Having determined the relationship between the frequency of liminality in the novella's structure and its spatial imaginary, we wanted to understand how the different categories of liminality function in the novella. Using the same horizontal bar visualization (Figure 7), we can see the number of instances of each of the five liminality categories we identified and tagged in the text: spatial, state, temporal, motion, and atmosphere.

As Figure 7 shows, by far the most frequent category of liminality is "spatial," with 166 instances. In our encoding, "spatial" often demarcates Goliadkin as occupying a liminal, threshold location such as a staircase or bridge. "Spatial" liminality's dominance aligns with the importance of the topography of the city to the work. As a concept, liminality is itself a spatial metaphor, and thus lends itself most obviously to interpretation in spatial terms.[62] Of course, it is worth remembering that all of our tagging is interpretive and, perhaps, our identification and tagging of liminality categories most of all.

The second most frequent category is that of "state" liminality. This category identifies instances where Goliadkin is presented in a state of liminality, such as in the novella's opening. The narrator describes Goliadkin's state on the boundary between sleep and wakefulness by using language denoting uncertainty. Goliadkin is himself "not fully certain" [*ne vpolne … uverennyi*], and his own hesitation is marked through a series of statements

[60] *The Double* foreshadows Dostoevskii's use of the protagonist's anticipation of an interlocutor in *Notes from Underground*. Bakhtin terms this discursive and philosophical tendency in Dostoevskii's writing "the word with a loophole." See Bakhtin, *Problems of Dostoevsky's Poetics*, introduction by Wayne C. Booth, ed. and trans. Caryl Emerson (Minneapolis, 1984), 232–37.

[61] On the symbolism of these St. Petersburg spaces, see Iurii Lotman, "Simvolika Peterburga i problemy semiotiki goroda," in *Izbrannye stat'i v trekh tomakh*, vol. 2 (Tallinn, 1992), 9–11; and Jacques Catteau, *Dostoyevsky and the Process of Literary Creation*, trans. Audrey Littlewood (Cambridge, Eng., 1989), 424–25.

[62] See Andrews and Roberts, "Introduction: Remapping Liminality," in Andrews and Roberts eds., *Liminal Landscapes*, 1–17.

using the interrogative particle *li*, meaning "whether" or "if."[63] *Li* casts doubt and marks the potential for multiple outcomes. This example is clear, but many instances of "state" liminality are more ambiguous, requiring significant analysis to determine whether a tag is appropriate. For example, when the double appears in Goliadkin's office in Ch. 6, the narrator remarks: "He even began, finally, to doubt his own existence."[64] We encoded this excerpt as an example of "state" liminality because it describes Goliadkin's hesitation, his own crisis of selfhood on the border of existence and non-existence. "State" liminality seems like it should be the most important for our analysis, but, as Figures 5–7 reveal, its 54 occurrences in *The Double*, at least according to our encoding decisions, represent less than a third of the count of instances of "spatial" liminality, revealing the latter's dominance. Our TEI tagging makes it clear that "spatial" liminality is the central architecture of the text's representation of Goliadkin's fractured interiority.

We next examined the types of liminality that occur in each geographical location using a side-by-side bars visualization (Figure 8). As outlined above, each instance of liminality in the text was encoded with a category and location using the attributes available in the <seg> tag. Figure 8 brings these two measures together in a representation that shows the relative number and diversity of liminal expressions present in each of the sixteen locations. Figure 8 demonstrates that there is no significant difference between the categories present in the most liminally charged indoor and outdoor spaces, although the spatial category's dominance is clearly visible. The largest number of categories, four, is found on the Fontanka Embankment and Liteinyi Prospekt, as well as at Goliadkin's home and office. Given that descriptions of exterior spaces in the city often include atmospheric, temporal, and other descriptors that coincide with the categories of liminality we devised, we anticipated that exterior spaces would carry substantially more liminal categories than interior ones. Instead, Figure 8 reveals that the three most liminal interior spaces are also those with some of the largest variety of categories. The very act of encoding these categories, even before creating the visualizations, revealed just how many different discursive strategies Dostoevskii employs to represent liminality in *The Double*.

Figures 5–8 illustrate the close connection between the formal structure of chapters and plot, Goliadkin's public humiliation and ensuing anxiety, and the spaces across which *The Double* is charted. Together our visualizations reveal that the multiple varieties of liminality that we have identified are most prominently marked in interior spaces (Olsufii Ivanovich's house, Goliadkin's apartment and office). While the categories of liminality occur equally in interior and exterior spaces, the number of identified instances of liminality is greater in the former. "Spatial" liminality is by far the most prevalent category, followed by "state." Despite this emphasis on spatiality in the liminal structures of the text, instances of liminality do not demarcate the ontological questioning of the double as we would expect in a fantastic text.

In fact, Dostoevskii represents psychological breakdown within a social context. He shows how the double's appearance exacerbates the insecurities and inferiorities that Goliadkin was already experiencing in his meeting with Dr. Rutenshpits in Ch. 2 and, particularly, in his attempt to infiltrate Klara Olsuf'evna's birthday party in Ch. 4. Chapter 5, in which the double first appears, is marked with significant liminality, both in terms of frequency and variety, but the preceding chapters carry more identified liminality than chapters in which the double plays a significant role, such as 6 and 7. The locations that are associated with identified liminality are precisely the sites of Goliadkin's social humiliation.

[63] Dostoevskii, *Polnoe sobranie*, vol. 1, 109.
[64] Ibid., 147.

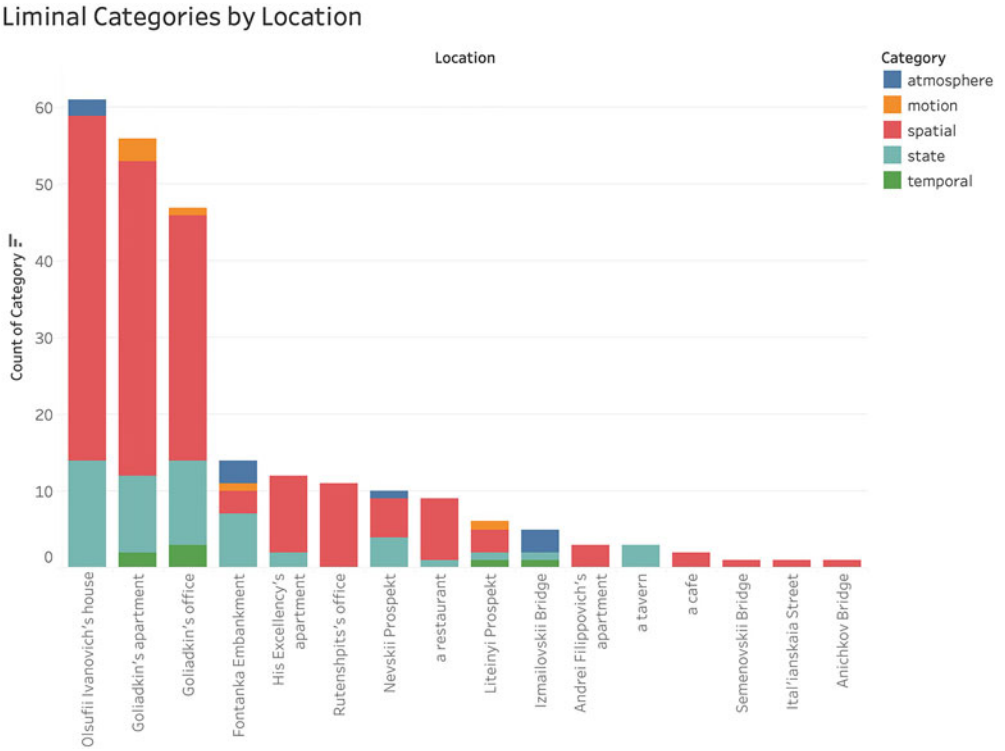

Figure 8. Vertical bars. Distinct count of liminal category for each location. The colors demarcate the unique categories of liminality. This figure was created by us in Tableau using data from our encoded corpus. Our Tableau workbook and data are available at the TEI edition of *The Double*.

As the novel progresses, Goliadkin's mental breakdown plays out within liminal spaces that reflect the deepening chasm in his selfhood, spaces which proliferate as that disintegration takes on a public dimension, as it is witnessed by more spectators. This suggests that hesitation in the text has more to do with Goliadkin's social identity and self-presentation than it does with the double's ontological status. The public witnessing of Goliadkin's breakdown, the playing out of his psychological collapse within a liminal landscape of staircases, doorways, and anterooms, serves to create a new kind of social novel, one which merges the social and the psychological. As such, *The Double* employs generic hybridity, drawing on the structural mechanisms of the fantastic in its realist depiction of Goliadkin's publicly unfolding crisis of selfhood.

Computational text analysis is sometimes seen as a positivistic, quantitatively-oriented approach to literature that strips reading of nuance and is ill-fitted for answering questions around form that have long preoccupied literary studies scholars.[65] One of the major tendencies in Dostoevskii studies is a focus on Dostoevskii's own struggle to express philosophical ideas through literary form.[66] Using computational text analysis, we return to traditional questions with a new lens. We are able to interpret the text on a micro

[65] See Nan Z. Da, "The Computational Case against Computational Literary Studies," *Critical Inquiry* 45, no. 3 (April 2019): 601–39.

[66] See, for example, Robert Louis Jackson, *Dostoevsky's Quest for Form: A Study of His Philosophy of Art* (Bloomington, 1978). More recently, see Katherine Bowers and Kate Holland, eds., *Dostoevsky at 200: The Novel in Modernity* (Toronto, 2021).

level through individual TEI-XML tagging decisions and then analyze the text's internal structure. Although visualizations often give the appearance of objectivity, our computational approach is interpretative and the visualizations reflect that approach. They are an extension of close reading rather than existing in opposition to it. They reflect complex discussions of textual elements and collective interpretive choices. We see such computational analysis as complementary to traditional philological approaches to Dostoevskii's texts; these methods add a new layer to the critical discussion of his works and allow for more complex analyses.

Our examination of liminality in the novella stems from our critical analysis of the text in terms of its generic identity. Dostoevskii's contemporaries saw *The Double* as a work of the fantastic, but considered the appearance of the doppelgänger to be symptomatic of Goliadkin's deteriorating, unstable psychology. Dostoevskii's reaction to their criticism underscores the fact that something more complicated is at work in the text. Understanding Dostoevskii's working definition of the fantastic as aligned with Todorov's concept of hesitation and taking into account Bakhtin's threshold chronotope, we came upon the idea of liminality as a conceptual tool for analyzing this complexity. Identifying liminality reveals moments of potentiality within the text, which are akin to Todorov's hesitation and Bakhtin's threshold chronotope in the sense that they are delineated by indecision and also must be determined by a decision on the part of the character, narrator, or reader. Encoding liminality in the text thus enables us to identify fissures in the narrative's structures of realism.

The visualizations we created using our TEI-XML-encoded edition of *The Double* allow us to examine multiple variables, including liminality, in relation to one another. Our analysis reveals that liminality clusters around Goliadkin's appearances in interior spaces associated with social interaction, occasions on which he experiences shame. There is always a witness to that shame, further exacerbating its social aspect; it pulls the internalized shame outward, rendering it public. In *The Double*, the social and psychological are inextricably linked to one another, remodeling the social novel as a genre. The text's central question is not whether the double's appearance indicates Goliadkin's psychological state. Rather, it is how Goliadkin's psychological state is manifested within the context of social realism. Identifying liminality in these moments of public shaming reveals the fissure between social status quo and Goliadkin's psychological torments. The double becomes the physical manifestation not of Goliadkin's madness, but of his social isolation. Hesitation in the text is not throwing the double's status into question, but rather Goliadkin's selfhood.

Computational text analysis works in complement with other methods within literary studies. A computer is not a replacement for a trained literature scholar, however. Digital Humanities as a field and its analytical methods, including computational text analysis, enable a researcher to examine aspects of a text or corpus of texts that would be challenging or even impossible without computational assistance. Computational text analysis does not promise a brand new, revolutionary reading—the text is still the same text—however, it does enable a researcher to examine structural patterns and linguistic details that can deepen our understanding of the functioning (or non-functioning!) of form and narrative.

Reframing critical debates around *The Double*, we argue that the many open textual potentialities Dostoevskii wrote into the structure of the text lie at the root of his contemporaries' misunderstanding of it. Our examination of these liminal moments using computational text analysis reveals that they are associated with hesitation in its broader sense in protagonist, narrator, and reader alike. The visualizations we created using our TEI-XML encoded edition demonstrate the connection between structural liminality and Goliadkin's social disintegration through repeated humiliation. This allows us to argue, contra Belinskii, that it is not only a social novel, but even a new kind of novel, one which

foregrounds the psychological aspect of social marginalization, but which, at the time of publication, lacked an audience able to understand it. The appearance of the doppelgänger trope was so strongly associated with the romantic fantastic for Dostoevskii's critics that they were unable to separate their preconceptions from Dostoevskii's new use of the fantastic to enrich realism. We might argue that *The Double* is ahead of its time, its first iteration anticipating Dostoevskii's mature phase of writing that begins with *Notes from Underground* (1864), his self-proclaimed realism "in a higher sense."[67] The form of *The Double* may have failed in Dostoevskii's terms, but the luminous idea resonated throughout his later works.

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[67] Dostoevskii, *Polnoe sobranie*, vol. 27, 65.