

Polyphony and the Atomic Age: Bakhtin's Assimilation of an Einsteinian Universe

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IN THE HISTORY OF SCIENCE, 1905 IS COUNTED AS AN ANNUS MIRABILIS that shook the very foundations of the physicist's view of the world. In that year, Albert Einstein published a trio of momentous papers, one of which marked the inception of his abstruse special theory of relativity. The reverberations of that upheaval were not immediately felt in the cultural consciousness of the epoch. Einstein would gain worldwide popularity in the decade after he was awarded the Nobel Prize in Physics in 1921. His popularization in Russia coincided with the aftermath of another earthshaking event, the Bolshevik Revolution. In 1922–23, the journal *The Book and the Revolution* (Книга и революция) printed a thirteen-page list of works on relativity available in Russian, and its merits were debated in the pages of such a prominent Soviet cultural mouthpiece as *Red Virgin Soil* (Красная новь).¹ Einstein had captured the imagination of the early Soviet intellectual world. In a place and time particularly amenable to notions of the modernist artist's capacity for "life creation" (жизнетворчество) and filled with the Marxist-Leninist desire to change fundamentally human nature and daily life, Einstein's version of the universe abounded with a compelling transformative potential.

The symbolist Andrey Bely spent the revolutionary days of November 1917 in his Moscow bathtub (to shield himself from bullets) reading the theory of relativity (Lavrov 8). In the equally tumultuous year of 1920, the futurist and poet of the revolution Vladimir Mayakovsky embarked on a scheme to send Einstein a "salutatory radio: to the science of the future from the art of the future."² Mayakovsky viewed relativity, with its potential to reverse the passage of time, in the context of the Russian avant-garde's most ambitious project, the quest for immortality. Evgeny Zamyatin, author of the scientifically

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minded dystopian novel *We* (Мы [1924]), intimately linked the unease caused by an Einsteinian conception of the world to the traumatic upheaval of revolution. Modernity's destabilizing, entropic forces were perceived as the singular source for both revolution and relativity.³ Yet it was the literary theorist Mikhail Bakhtin (1895–1975) who moved beyond the popular revolution-era appropriation of relativity to accomplish one of the most informed applications of Einstein's scientific revolution in the cultural sphere.

The picture of a universe rife with simultaneous possibilities and choices that emerged after the popularization of relativity found a strong resonance in Bakhtin's exposition of the novel. Scholars have pursued the more general philosophical affinities between an Einsteinian physical universe and a Bakhtinian literary world.⁴ But Bakhtin's work can be more clearly aligned with other twentieth-century intellectual currents fascinated with Einstein's theories. In this essay I argue that a post-Einsteinian conceptualization of the physical world is an indispensable element of Bakhtin's descriptions of the world of the novel. Such an argument presupposes a radical change between pre- and post-Einsteinian epistemology. From a scientific, and even cultural, perspective, such a change took place. Bakhtin, however, also appreciated the nuanced implications of Einstein's discovery. His debt to Einstein resides in the power to reevaluate the known world through subtle yet epiphanic shifts of perspective.⁵ Bakhtin elevates the role of the reader and recasts centuries of literary history in the light of a universe divested of physical and metaphysical absolutes.

The world as envisioned by Einstein is a startlingly subjective entity. Leonard Shlain finds the intersection of art and physics precisely in the introduction, by the new physics, of subjectivity into science (23). A comparable convergence enables Bakhtin to describe a novelistic universe that also takes into consid-

eration the lack of an objective, absolute point of view. His lifelong occupation with the reader's perspective is marked by a variety of attempts to validate a wholly subjective model of literary theory. When Bakhtin most overtly articulates the cornerstones of his theoretical lexicon—the chronotope, carnival, and polyphony—Einstein is always in close proximity. With a particularly Einsteinian understanding of the observing subject, Bakhtin finds in the scientific discoveries of his lifetime the key to the chronotope's personalization of time and space and to carnival's destabilization of semantic highs and lows. He achieves his most sustained and developed use of twentieth-century considerations of the subject in the notion of polyphony. The crux of the epistemological intersection of Bakhtin and Einstein lies in equating Bakhtinian polyphony with a postrelativity understanding of subjectivity.

By examining polyphony's presentation near the beginning and the end of Bakhtin's career (in the form of two closely related books on Fyodor Dostoevsky), I hope to show the transformation of his early implicit and unarticulated interest in an Einsteinian, physically nonobjective universe into an explicit recognition of the Einsteinian nature of his own worldview. The contrast that emerges from this process is not that of two Dostoevskys or two Einsteins but that of two Bakhtins. When first reading Dostoevsky, Bakhtin was only vaguely aware of relativity's applicability to literary depictions of the world. He returned to Dostoevsky decades later as a critic now attuned to the need for incorporating Einstein's new physics into his explication of novelistic realism. Bakhtin's books on Dostoevsky demonstrate the changes produced in a reader by the assimilation of scientific paradigm shifts into the cultural consciousness.

In a single year at the start of the twentieth century, Einstein had toppled two tenets at the core of Newtonian physics. He had challenged long-held beliefs in the absoluteness of time

and space, proposing a conception in which all measurements and calculations were critically intertwined with the observer's point of view. With an awareness of Einstein's relativity, it became possible, and even unavoidable, for two people to experience and be subject to time and geography differently. Einsteinian physics was born out of a moment of failure. Newtonian principles could not account for the outcomes of late-nineteenth-century experiments in optics and electrodynamics—the behavior of light seemed to defy the physical limitations of traditional physics. Einstein's conjecture that light's speed remained constant set into motion a spate of rapidly written papers that would culminate in his initial formulation of relativity.⁶

Einstein was able to correct Newton by reenvisioning the process of taking measurements. In a pre-Einsteinian scenario, the observer is external to the system under observation. For Newtonian mechanics, all external observers are equivalent; all will take the same measurements of the system. Einstein did not challenge the axiomatic laws inherent to the system but rather introduced a third element. He accounted for the shortcomings of Newtonian physics by surmising that a second observer, also external to the system, would not take measurements identical to those of the first observer. In insisting on the uniqueness of each point of observation, Einstein rendered the concept of an external position, of objectivity, meaningless. With no authoritative perspective on the system, all measurements, including those of time, become subjectively relative to the observer.

Einsteinian physics was built on the decentralizing, yet universally applicable, notion of relativity. Every observation, every measurement had to take into consideration the viewer's subjectivity, and thus the observer's individual nature became integral to measurements of velocity and distance. While traditional laws of motion generally coincided with the expectations of human intuition,

Einstein's theories were based on speculative scenarios that expressly contradicted intuitive predictions of the measurement of space and time.⁷ Bakhtin would introduce such a breakthrough in approaching the world of the novel.

Einstein's rethinking of the authoritative and external observer finds a close equivalent in Bakhtin's description of the novel. By aligning himself with the asynchronicity of his time, Bakhtin speaks to a reader who shares his experience of the epistemological trauma and liberation of the early twentieth century. The reader championed by Bakhtin can find reason in the counterintuitive and empirical truths in subjectivity; both discoveries are justified by the theory of relativity. Thus, while most applications of relativity focused on artists whose works were shaped by the material conditions of the twentieth century,⁸ Bakhtin sought evidence of a relativistic worldview in an earlier period. In his estimation, Dostoevsky and classical Greek literature also exhibited Einsteinian traits. The imposition of relativity on the literature of the past deserves special attention as a unique facet of Bakhtin's appropriation of the new physics.

The age of relativity brought with it such a radically new worldview that the very concept of artistic realism could survive only as a convention, as a personal agreement between author and reader. Using less empirical and more hypothetical models, Einstein embraced the ability of the new physics to go beyond the limits of experimentation and posit physical phenomena contrary to human intuition. Many commentators on modernism in the arts have used Einstein as a reference point to mark the start of a cultural and epistemological epoch radically different from preceding ones. Thomas Vargish and Delo Mook substantiate this distinction with an extensive discussion of the loss of an absolute reality and a single-point perspective in the arts. Their notion of an "epistemic trauma" articulates the rupture many modern scholars associate

with relativity in the discourse of modernism (14–50).⁹ By insisting on the emergence of a distinct turn-of-the-century epistemology, commentators on modernism have incorporated relativity into the indispensable foundation of a twentieth-century intellect.

While most artists and critics recognized relativity's dramatic resonance with revolution and upheaval, Bakhtin grasped its affinities with elements of Russian culture that more subtly undermined a traditional (and distinctly Western) aesthetic worldview. In the early twentieth century, a renewed interest in Orthodox Christian iconography articulated one facet of this divergence. Boris Egorov includes Father Pavel Florensky's concept of "reverse perspective" ("обратная перспектива," from a 1919 essay of that title) in his extensive list of Bakhtin's early epistemological influences (13). Florensky postulated that the perspective of an icon is constructed such that it places the viewer inside rather than outside the depiction. To a devout Orthodox believer such as Bakhtin, Florensky's rejection of centuries of artistic theory was a discovery as momentous as Einstein's theories. Florensky demonstrated the applicability of modern concepts to adamantly premodern subjects. He used a point of view that privileged the subjectivity and individuality of the observer to substantiate a fifteen-hundred-year-old artistic tradition. If Florensky could locate nontraditional uses of perspective in Byzantine icons, Bakhtin could argue for relativistic characteristics in Dostoevsky and ancient satire.

By the time of Bakhtin's 1919 critical debut, however, all manner of Russian intellectual activity, from literature and the arts to physics and the sciences, was beginning to fall under the purview of the country's new ideological arbiters, Marx and Lenin. Voluminous arguments were made for and against the compatibility of relativity and Marxist-Leninist dialectical materialism in the Soviet Union in the 1920s.¹⁰ I have indi-

cated relativity's association with revolution and its popularity among significant intellectual figures such as Bely, Mayakovsky, and Zamyatin. While the avant-garde embraced the creative and transformative potential of relativity, the theory officially remained on ideologically unstable ground throughout the early Soviet period. The relativity debate reignited in 1951–52 in the pages of *Questions of Philosophy* (Вопросы философии), with an intentionally polemical series of articles. The final appraisal was that dialectical materialism requires absolutes and therefore relativity should be rejected.¹¹ Relativity was a publicly contentious issue both at the moment Bakhtin formulated his notion of polyphony (the late 1920s) and when he revised it to include an explicitly Einsteinian connection (the late 1950s). In 1963, when he most forcefully allied his work with Einstein, he openly embraced an un-Soviet theory. The championing of relativity, particularly through polyphonic subjectivity, was dangerous in the Soviet Union; Bakhtin may have been countering traditional dogma with subversive motives in mind.¹²

Neither Bakhtin nor Einstein championed relativism. The Einsteinian world that Bakhtin referenced had been freed of Newtonian absolutes but was still governed by discernible physical laws. Caryl Emerson ascribes an ethical dimension to both theorists in explicitly distinguishing Bakhtin's embrace of relativity from any acceptance of moral relativism (155–56). Neither Bakhtin nor Einstein used the destabilizing forces of modernity, which both harvested, to undermine traditional notions of responsibility or accountability. Both thinkers maintained a profound respect for the value of the individual human subject.¹³ Paramount in Bakhtin's work is a deep interest in searching out and acknowledging origins. By harnessing the subtleties of Einsteinian relativity and drawing out its counterintuitiveness, Bakhtin repositioned his authorial point of view of a text out of the boundaries of the text itself and into the material world of the reader. The lib-

eration of relativity returned him to the original reader without the loss of his modernist outlook. His approach to literature, focused on how a work is read more than on how it was written, permitted him to find the work's originating principles anachronistically in his own era and not in the author's.¹⁴ More pervasive than a theory of reception, Bakhtin's prioritization of readerly subjectivity renders the eternally present, eternally true reality of the reader more significant than the author's historically limited perspective. Consequently, Bakhtin could understand classical, Renaissance, and nineteenth-century literature with a twentieth-century mind-set. He could argue for a relativistic universe in texts that knew only Ptolemy, Copernicus, or Newton because this model of the universe was valid for him.

In 1973, toward the end of his life, Bakhtin gave a telling appraisal of his century in a conversation with Viktor Duvakin. He simultaneously describes Einstein and Freud with the highest Bakhtinian praise: "a discoverer [открыватель] of genius . . . he was able to uncover [раскрыть] something that nobody had seen or known of before him" (qtd. in Kolyshkin 204). Bakhtin's characterization of Freud and Einstein exploits the multiple levels of meaning in the words открыватель and раскрыть. Their English translations "discoverer" (alternatively, "one who opens something") and "to uncover" preserve the common root. In Bakhtin's usage, both words carry the implication of subjective realization rather than empirical invention, of the expansion, not reduction, of epistemological possibilities. Bakhtin came to incorporate Einstein into his theory of the novel over time and with a noticeable trajectory toward greater generality and centrality. With relativity at the core of the particular notion of subjectivity on which it relies, his work reveals a constant awareness of and reliance on Einstein's scientific developments. However, Bakhtin must reevaluate his own early intellectual influences and reread his initial formulation of

polyphony before he manifests the full extent of this Einsteinian undercurrent.

Possibly Bakhtin's earliest recorded allusion to Einstein is in a lecture he gave in 1924, in a discussion of Kant, notes of which were taken by L. V. Pumpyansky ("Лекции"). The next significant appearance of this theme comes in the 1937–38 essay "Forms of Time and the Chronotope in the Novel: Notes toward a Historical Poetics" ("Формы времени и хронотопа в романе: Очерки по исторической поэтике"). By this time, relativity has become an important model and source that Bakhtin adapts for use as a literary concept, but it nevertheless remains in the distinct sphere of mathematics and science. His addition of overt references to Einstein culminates in his 1963 *Problems of Dostoevsky's Poetics* (Проблемы поэтики Достоевского), a highly reworked edition of the 1929 *Problems of Dostoevsky's Art* (Проблемы творчества Достоевского). Many sections of the original version survive Bakhtin's rewriting of the book intact but are refocused to advance a significantly altered argument on Dostoevsky's contribution to the development of the novel. Einstein, wholly absent from the 1929 book, offers Bakhtin a strategy for emending his evaluation of Dostoevsky. Bakhtin places key references to Einstein in sentences or paragraphs that are new to the 1963 book and come immediately after unaltered sections of text from the 1929 edition. The contrast between the early and late Bakhtin provided by these highlights shows precisely how Einstein emerged as Bakhtin's conduit for embracing the counterintuitive and for elevating subjectivity to the core of the theory of the novel.

The first Dostoevsky book is a product of Bakhtin's engagement with the Kantian aesthetics that mark his work from the 1920s. It follows a series of essays that address the problem, in distinctly Kantian terms, of the conflicting points of view of authors and characters. As an attempt at a concrete application of Bakhtin's theoretical works of the

preceding decade, the 1929 Dostoevsky book must be considered from two perspectives: it builds on the epistemology and terminology that Bakhtin had developed under the sway of Kant; yet it is also the book Bakhtin chose to rewrite thirty years later, when Einsteinian notions of space and time had taken hold of his appreciation of the novel. I will use it to demonstrate how readily he could move from Kant to Einstein. I believe that Einstein's constant, yet unarticulated, presence in Bakhtin's worldview explains the ease with which the theorist could preserve and restate his early concepts in terms that later allied them with Einstein rather than Kant.

Kant provided Bakhtin with a philosophical scaffolding for looking at the interaction of the mind and the world. Michael Holquist parlays this scaffolding into a connection with relativity.¹⁵ The noncoincidence that Holquist identifies with relativity is a tool for updating Kantian aesthetics to compensate for the modern age's rejection of categorical absolutes. Noncoincidence emerges as an expression of the privileging of readerly subjectivity and the counterintuitive that marks Bakhtin's work. Indeed, the neo-Kantians (including Ernst Cassirer, whose 1921 work on relativity was translated into Russian and published in Petrograd in 1922) had to consider the influence of physics on their philosophy.¹⁶ Immediately after the October Revolution, Bakhtin associated with a number of intellectuals, subsequently known as the Nevel school, who were discussing the work of the neo-Kantian Marburg school. This is the context in which Bakhtin first articulated his approach to literature. One of his earliest major essays, "Author and Hero in Aesthetic Activity" ("Автор и герой в эстетической деятельности" [1920–23]; *Собрание 1*: 69–263), proposes an entrance into the realm of literary creation that hinges on a detailed classification of the author-character relation. He develops the parameters of this relation with the terminological precision that will mark his career.

Three key ideas explicated in this essay demonstrate the tenor of his system and anticipate its shift from Kant's Newtonian perspective to Einsteinian relativity.

Bakhtin employs the notions of context (контекст), outsidedness (внезаходимость), and horizon (кругозор) to distinguish the author's point of view from the hero's. His application of Kantian aesthetics to the literary world leads him to focus on the interaction of the author's mind and knowledge of the world with those of the characters. Kant's philosophical system was founded on the problem of how the mind knows the world. Bakhtin's perspectival language expresses his engagement with the manifestations of this problem in fiction. In attributing a Kantian structure to the mind of a fictional character, Bakhtin demonstrates the use of systematic philosophy in literary criticism. Outsidedness is a necessary facet of Kant's system, a vehicle for introducing the external, a priori categories that distinguish his philosophy from pure empiricism. However, Kant's understanding of outsidedness in a Newtonian context becomes problematic in the twentieth century. Bakhtin vaguely senses this conflict by the late 1920s, when he begins working on Dostoevsky's polyphony. The placement of the authorial point of view outside that of the hero works only when all external positions are equivalent. In the age of relativity, there can be no presumption of such an equivalency. Bakhtin's outsidedness is tinged with the instability of its semantic sibling, the Einsteinian notion of relativity.¹⁷ When Bakhtin later revises his understanding of polyphony, the Kantian appreciation of time and space as absolute, singular, intuitive entities yields to their modern relativistic natures, of which he was always aware.

At a lecture Bakhtin gave in Leningrad in October or November 1924, Pumpyansky made the following notes:

Time is also viewed by Kant as a unified subjective horizon. Kant is looking not just at

time composed of calculations (since it does not presume an image of time). Musical time is another matter; it is entirely a temporal image. The theory of relativity conflicts *only with this* (aesthetic) time. This is the type of space and time in which an aesthetic image is constructed.¹⁸

This is an intriguing note, even if it does lack the authoritativeness of a direct citation of Bakhtin. The overarching theme of this lecture, and of the one that preceded it, is Kant's appreciation of space. The paragraph on time comes as an afterthought appended to this topic. Bakhtin recognizes that Kant considers more than the mere quantitative nature of time. Time is perceived by the mind, thus it is contained in a horizon (in Bakhtin's term) or in "pure intuition" (in Kant's; Crawford 101–02). Yet, while pure Kantian categories can sustain unity in subjective time, relativity cannot. In an Einsteinian world, every observer offers a unique perception of time. When this multiplicity is collapsed into a single authoritative point of view, the claim of time's existence as an absolute, of its intuitiveness, is called into question, even in the aesthetic world of author and hero.

With polyphony, Bakhtin introduced a third perspective into the author-hero relation—that of the reader. If the author's point of view can no longer be privileged over those of the heroes, each reader must independently determine which view is authoritative. This third point of view on the world of the novel had the same decentering effect on Bakhtin's early Kantian aesthetics as did Einstein's introduction of another observer on a Newtonian physical world. Bakhtin began to use a relativistic worldview in his 1929 invention of polyphony but realized it to be relativistic only decades later. When Bakhtin does formulate an approach to literary time that hinges on change, multiplicity, and an intimate binding of space and time, Einstein reemerges in his writing as a key intellectual precursor. Bakhtin's 1937–38 essay "Forms of

Time and the Chronotope in the Novel," introducing a literary fusion of time and space in the hybrid idea of a chronotope, is a significant intermediary step between his early and late explications of polyphony. The notion of the chronotope is one of Bakhtin's major contributions to the lexicon of international literary studies. Consequently, after employing this neologism in the essay's title, he must devote the second paragraph of this work to a definition of the term:

We will give the name *chronotope* (literally, "time space") to the intrinsic connectedness of temporal and spatial relations that are artistically expressed in literature. This term is employed in mathematics and was introduced as part of Einstein's theory of relativity. The special meaning it has in relativity theory is not important for our purposes; we are borrowing it for literary criticism almost as a metaphor (almost, but not entirely). What counts for us is the fact that it expresses the inseparability of space and time (time as the fourth dimension of space). We understand the chronotope as a formal and constitutive category of literature; we will not deal with the chronotope in other areas of culture.¹⁹

Here Einstein is elevated to a position much closer to the discoverer Bakhtin would later celebrate. Einstein is the source of a monumental idea that Bakhtin is transposing from the scientific realm to the literary. Einstein did use a term close to *chronotope* in his 1912 manuscript for a paper on the special theory of relativity. In a section reconciling his findings on the nature of time with a classical geometrical plane, he twice uses the word "space-time coordinates" (88–91).²⁰ By stripping Einstein's term of the exclusivity of the mathematical coordinates and translating it from German to Greek, Bakhtin turns Einstein's very specific notion of time supplying the fourth dimensional coordinate on a Cartesian plane into a concept that seems applicable in all spheres of culture. He indicates an

intermediary between himself and Einstein in a footnote to the passage quoted above. The Russian physiologist A. A. Ukhtomsky had used the term *chronotope* to link space and time in a behavioral sense.²¹ Hearing the term at a 1925 lecture given by Ukhtomsky, Bakhtin had a precedent for the applicability of relativity beyond its mathematical and physical usage.²² He begins his discussion of the chronotope with Einstein and relativity, but by the end of this sentence, and for the rest of the essay, he deals only with literary landscapes and “the inseparability of time and space” on the written page.

The moment of this transition comes in the heavily qualified statement “almost as a metaphor (almost, but not entirely).” It would seem that Bakhtin is using his term as a metaphor—a “transference” of meaning from one system to another.²³ Yet he hesitates in calling this usage a metaphor. He is not simply borrowing a new word and recontextualizing it; he is relying on the simultaneous presence of both contexts, the scientific and the literary, in the reception of this concept. The chronotope would be incomprehensible without Einsteinian physics since the inherent interconnectiveness of space and time is nonsensical in a traditional Newtonian universe (and is problematic even in a Kantian stance on the a priori, transcendental natures of space and time). The very idea of a chronotope, an appreciation of time that is dependent on the position of the actor, requires a degree of instability that excludes the possibility of absolute time and space. Without a solid scientific foundation, the chronotope is merely an abstract critical term and not the cultural and material reality Bakhtin desired. We see his greater project for the novel—the interweaving of the novelistic world and the real world of the reader—emerging at this point. But it has not yet fully appeared, and thus this comparison is not bold enough to topple the distinction between an aesthetic world and the physical world. Instead, it binds the two with a rigid

parallel existence, formally maintaining this distinction while simultaneously and subtly (in parentheses) beginning to undermine it.

As Holquist argues, Bakhtin does not subscribe to a formalist separation between real time and fictional time (115–21). Any changes in the way time is perceived in the physical universe must also be incorporated into the literary sphere. In my evaluation, by employing Einstein's theorems on time in his analysis of the development of literary time, Bakhtin is able to circumvent and render obsolete the distinction between *syuzhet* (сюжет), the progression of events as encountered in a narrative, and *fabula* (фабула), the progression of events given in linear chronology. Since there is no absolute time, no absolute chronology, there can be no preference for one version of a story over another; all viewpoints and chronologies become equally viable. In essence, there is no *fabula*, or rather *fabula* becomes just one more *syuzhet*, another version of the multivalent, polyphonic world of the novel. Looking back on Greek, Roman, and Renaissance literature armed with a distinctly twentieth-century notion of physical time, Bakhtin can reevaluate works over two thousand years old in a distinctly new and modern fashion, comprehensible only to a twentieth-century reader.²⁴ The chronotope is precisely the tool he uses to this end.

Bakhtin has moved away from Kant and toward Einstein, but his chronotope essay remains suspended between the two. The formulation of the chronotope reveals the transitional nature of Bakhtin's thought at this moment. He has expanded his evaluation of literature beyond a predominantly aesthetic view but has not yet reached the conclusion that the physicist's picture of the universe can provide a completely valid set of terms for describing the world of the novel. The opening paragraphs of the chronotope essay establish an explicit link between Bakhtin's emerging view of a (literary) world fraught with multiple notions of intercon-

nected time and space all dependent on the shifting points of view of the author, reader, and characters and an Einsteinian universe devoid of absolute time and space. However, in this essay he still maintains a very distinct separation between science and literary criticism. He distances his own application of the concept of a chronotope from that in relativity theory by limiting Einstein's contributions to the realms of physics and mathematics.²⁵ He shows his debt to Einstein but still strives to remain creatively independent from him.

In the early 1960s, when he is working on a second version of the Dostoevsky book, Bakhtin relinquishes some of this independence and more fully incorporates Einstein into his literary criticism. In a notebook from 1961, he makes a straightforward analogy:

The tasks that face an author and his consciousness in a polyphonic novel are far more complicated and involved than those in a homophonic (monologic) novel. The unity of an Einsteinian world is more complicated and involved than that of a Newtonian world; this is a unity of a higher order (a qualitatively different unity).²⁶

This simple comparison shows the foundation of Bakhtin's work on the novel. It establishes an essential facet of polyphony: polyphony can be seen (and created) only by those who can move beyond a monologic, Newtonian worldview and can embrace the Einsteinian revolution. Bakhtin elaborates on the nature of this polyphonic world in a special Dostoevsky notebook from later that year:

The author's position, itself dialogic, ceases to be all-encompassing and completing. A world of multiple systems is revealed with not one but several reference points (as in an Einsteinian world). But these various reference points and, consequently, these various worlds are interconnected with one another in a complex polyphonic unity. The author (the Einsteinian reason) realizes the function of this complex unity.²⁷

The world of the polyphonic novel far less resembles the monologic aesthetic world than it resembles the physical universe in which relativity is the accepted model.

Bakhtin now complicates the author-hero relation of his first essays by using polyphony's relativistic multivalence to devalue the primacy of the author's point of view. The author can exist only in the form of an "Einsteinian reason" that helps anchor an otherwise unstable polyphonic world. Polyphony introduces the reader's reference point, and, as Einstein has shown, various points of view will result in various readings. This relativity does not jeopardize the unity of the work, since all observers are still viewing the same system. But this unity is rendered complex by its refusal to prioritize one perspective, one subjective horizon, over another. Author and hero are now two equivalent positions determined by dialogically engaging each individual reader. The novel is designed not to be an artificial construct but rather to represent the subjectivity and multiplicity of the real world, which, in Bakhtin's age, is Einsteinian. Bakhtin would most fully argue this point in *Problems of Dostoevsky's Poetics*.

Bakhtin presents a Dostoevsky who understood and even anticipated forthcoming discoveries in mathematics and physics. Intrinsic to the concept of polyphony is a belief in a multiplicity of equally valid perspectives. There is no authorial absolute in the decentralized universe of the polyphonic novel. Bakhtin sees Dostoevsky as recognizing the artificiality of a monologic understanding of space and time. His creations do not abide by absolute time, the traditional nineteenth-century notion of time. Bakhtin ascribes this polyphony to Dostoevsky's discontent with the accepted views of space and time that governed the artistic sphere as well as the natural world. He writes, "In fact polyphony itself, as the event of interaction between autonomous and internally unfinalized consciousnesses, demands a different artistic conception of time and space; to use Dostoevsky's

own expression, a 'non-Euclidian' conception" (*Problems* 176).²⁸ Bakhtin seems particularly taken with Dostoevsky's artistic innovations in the representation of time and space as a prophecy of the twentieth-century view of a physical universe that embodies limitless autonomous points of view. It is the role of the critic to make this connection and discern the remarkable scope of Dostoevsky's vision and its affinity with a twentieth-century worldview. Bakhtin's stated goal (found only in the introduction to the reworked Dostoevsky book) is to show Dostoevsky the "great innovator" ("величайший новатор") who created a "new artistic model of the world, one in which many basic aspects of old artistic form were subjected to a radical restructuring" (*Problems* 3).²⁹ Bakhtin was the first to reveal how Dostoevsky, with the polyphonic novel, was fundamentally different from his literary predecessors. Other critics came close to expressing this realization but fell short. Bakhtin's first priority is to shed light not on Dostoevsky but on the critical failure to read Dostoevsky properly.

The first chapter of *Problems of Dostoevsky's Poetics* is titled "Dostoevsky's Polyphonic Novel and Its Treatment in Critical Literature" ("Полифонический роман Достоевского и его освещение в критической литературе"). The focus is different from that of its 1929 variant ("The Main Features of Dostoevsky's Art and Their Treatment in Critical Literature" ["Основная особенность творчества Достоевского и ее освещение в критической литературе"; *Собрание* 2: 11–42]). Many passages move from one version of this chapter to the other with little or no modification, but the overall emphasis shifts to an explication of previous critics' failure to recognize Dostoevsky's polyphony.³⁰ Bakhtin states that all the critics (including himself) have been bad readers:

To this day, the majority of critical and historico-literary studies on [Dostoevsky] still ignore the uniqueness of his artistic form and seek this uniqueness in his content. . . . But in doing so

the content itself is inevitably impoverished—it loses the most essential thing, the *new thing* that Dostoevsky had glimpsed. Without understanding this new form of visualization, one cannot correctly understand that which was seen and unveiled in life for the first time with the help of that form. . . . Everyone interprets in his own way Dostoevsky's ultimate word, but all equally interpret it as a *single* word, a *single* voice, a *single* accent, and therein lies their fundamental mistake. The unity of the polyphonic novel—a unity standing above the word, above the voice, above the accent—has yet to be discovered.

(*Problems* 42–43)³¹

The final two sentences of this quotation are the last two sentences of both versions of this chapter, but the first part, the more sweeping evaluation of Dostoevsky's innovation and unique vision, was added to the later edition. In 1929 Bakhtin suspected that his analysis of Dostoevsky was truly novel, but not until he reworked this study in 1963 was he able to elaborate concretely wherein the novelty lay. In this critical moment, he reveals his strong interest in the centrality of the reader's role. The novelty of Dostoevsky's world is lost on those who do not recognize the affinities between this artistic world and the reality surrounding them.

The metaphoric flash of lightning that illuminated this problem in Dostoevsky criticism came when Bakhtin connected polyphony and relativity, as is evidenced by the notes he took in 1961. He had already formulated a theory of Dostoevsky's polyphony in the 1920s, by complicating his work on the author-hero relation. In revising the 1929 Dostoevsky book, he adds a third element, intertwining this concept with the notion of relativity: a reader aware of the unfinalizable subjectivity of the polyphonic novel's hero. The subtle perspectival shift from a novel hero to a reader aware of the hero's novelty reveals the fully Einsteinian foundation of Bakhtin's explication of polyphony. In Bakhtin's estimation, this reader, the true reader of the

polyphonic novel, transforms Dostoevsky into a determinedly modern figure. All the Dostoevsky scholars—even the 1929 Bakhtin, who had yet to expand beyond his Kantian aesthetics—failed to treat this author as one more readily understood in the age of relativity than in his own century.

Bakhtin began to understand Dostoevsky's place in a twentieth-century model of the world in his first book, and some passages could easily be amended to reflect this refocusing of his evaluation of Dostoevsky. In this amending, he identifies a fundamental element of his epistemology, so the changes are as much a comment on Bakhtin as on Dostoevsky. The following paragraph from this first chapter survived the reworking fully intact, but he altered it simply by adding the final sentence, which I have italicized:

In actual fact, the utterly incompatible elements comprising Dostoevsky's material are distributed among several worlds and several autonomous consciousnesses; they are presented not within a single field of vision but within several fields of vision, each full and of equal worth; and it is not the material directly but these worlds, their consciousnesses with their individual fields of vision that combine in a higher unity, a unity, so to speak, of the second order, the unity of a polyphonic novel. The world of the ditty combines with the world of the Schillerian dithyramb, Smerdyakov's field of vision combines with Dmitry's and Ivan's. Thanks to these *various worlds* the material can develop to the furthest extent what is most original and peculiar in it, without disturbing the unity of the whole and without mechanizing it. *It is as if varying systems of calculation were united here in the complex unity of an Einsteinian universe (although the juxtaposition of Dostoevsky's world with Einstein's world is, of course, only an artistic comparison and not a scientific analogy).* (Problems 16; trans. modified)³²

Here Bakhtin is shown to be like the critics he chastises for almost uncovering the idea of

polyphony but falling short of the discovery. The 1929 Bakhtin very nearly made the connection between a polyphonic world and an Einsteinian world, and all it took to complete this thought was a single sentence added nearly thirty-five years later. By doing so, he adds a significant nuance to this study. Had he connected Dostoevsky to polyphony alone, he would have been offering an insight available to any nineteenth-century reader. With the addition of an Einsteinian universe to Dostoevsky's poetics, Bakhtin declares that only the modern reader can comprehend this world because in fact it is a twentieth- and not nineteenth-century cosmology that Dostoevsky describes. The anachronism of this move matters little to Bakhtin. It is not an anachronism from his point of view since he deals solely with the reader's perspective.³³ In reading Dostoevsky in 1963, Bakhtin reveals more about his world-view than about Dostoevsky's.

It is not improbable that Bakhtin was thinking of this very section of the book in 1961 when he wrote the notes quoted above. They are lexically and thematically similar to *Problems of Dostoevsky's Poetics* (describing a higher unity and a complex unity) and show an interest in formulating a conception of the wholeness of the polyphonic novel. The passage in the book, even in the 1929 version, shows Bakhtin's predilection for a relativistic universe composed of independent, autonomous worlds. His vision of Dostoevsky's world belonging in an Einsteinian universe also points to a crucial difference between his use of relativity in formulating the chronotope and in formulating polyphony. For the chronotope essay, Einsteinian physics functioned as a springboard from which Bakhtin developed his own concepts and ideas. These developments are unabashedly indebted to Einstein for their central epistemological framework, and an Einsteinian cosmology is always lurking in the shadows of the chronotope. Relativity is ever necessary for a coherent understanding of this uniquely

twentieth-century concept, but the direct connection between the two theories is dismissed early in the chronotope essay.

The connection between polyphony and relativity is far more persistent and deeply rooted, in Bakhtin's mind, than that of the chronotope and relativity. For the chronotope essay Bakhtin borrows a term from Einstein's realm (with all its scientific baggage) but uses it to his own end. For polyphony, he borrows an entire model of the universe. He did not seek to enforce a strict separation between the artistic sphere of the polyphonic novel and the scientific sphere of relativity. He does indeed qualify his linking Dostoevsky's world with Einstein's as "an artistic comparison and not a scientific analogy," but this statement is very different from his earlier, superficially similar caveat in the chronotope essay. By declaring his use of Einsteinian terminology in the chronotope essay to be "almost a metaphor," Bakhtin makes it clear that he intends to effect an unambiguous shift in its usage—a shift from the scientific to the literary context. He never intended to rid the term of its scientific implications, but he does successfully change its sphere of application. With polyphony, he does not feel compelled to make a strong distinction between ideas that originated in the scientific world and those whose provenance is in the world of literary criticism. In many ways he manages to bring these two worlds together in his evaluation of the polyphonic novel. As the overall changes to the Dostoevsky book bear out, Bakhtin transported Einstein into the literary realm and aestheticized relativity. This aestheticization is fully realized through the "artistic comparison" by which he extends Einstein's work on the physical universe into the literary world of fictional universes. The goal of Bakhtin's rewritten book is to update the critic's perception of the artistic world to coincide with a modern picture of the physical world. By redirecting relativity into the aesthetic, Bakhtin ushered the literary universe into the twentieth century.

He accomplished this reevaluation of the nature of the literary world by looking backward and not forward. His main focus is Dostoevsky and the nineteenth-century novel, but he extends his analyses to older works as well. Much of his discussion of carnival in this book is centered on Menippean satire. This section, another addition to the 1963 book, shows an affinity with his introduction of Einstein into the work. Menippean satire constructs a world of ambivalence and radically shifting values. Absolutes and hierarchies are undermined, and the "joy of change and joy of relativity" are celebrated (*Problems* 160).³⁴ With carnival, Bakhtin eclipses boundaries and draws the reader into the literary world and into the story itself. The viewer is an active participant in carnival, and the topsy-turvy nature of Menippean satire implicates readers in this reversal and brings them into familiar contact with the narrative's heroes. This elevation of the reader is symptomatic of the revolution in physics advanced by Einstein. When we do not know specific details about the observer, measurements are rendered meaningless; when we do not keep the reader in mind, the ambivalence and multiplicity of carnival is lost. Bakhtin delighted in the ever-changing, always relativistic nature of the literature of carnival. The Einsteinian component of his understanding of relativity becomes particularly significant for carnival. The presence of relativity, and not relativism, shields Bakhtinian carnival from implying a shirking of moral or ethical responsibilities and shows it to be yet another manifestation of Bakhtin's celebration of modernity's shifting perspectives and unbounded subjectivity.

At the end of *Problems of Dostoevsky's Poetics*, Bakhtin reiterates the core of this project to introduce the indeterminacy of the age of relativity into literary theory. The last paragraphs of the book (not to be found in the 1929 version) read:

The *scientific* consciousness of contemporary man has learned to orient itself among the

complex circumstances of “the probability of the universe”; it is not confused by any “indefinite quantities” but knows how to calculate them and take them into account. This scientific consciousness has long since grown accustomed to the Einsteinian world and its multiplicity of systems of measurement, etc. But in the realm of *artistic* cognition people sometimes continue to demand a very crude and very primitive definitiveness, one that quite obviously could not be true.

We must renounce our monologic habits so that we might continue to feel at home in the new artistic sphere which Dostoevsky discovered, so that we might orient ourselves in that incomparably complex *artistic model of the world* which he created. (272)³⁵

This is the task that he sets before readers and the admonition that he delivers to them. They must not fall behind the times; they must ensure that the literary critical world keeps abreast of the physical world. Bakhtin recognized this explicitly modern quality in Dostoevsky and drew it out in his formulation of polyphony. Dostoevsky, like the Einstein whom Bakhtin would describe to Duvakin, was a discoverer, one who had seen something nobody knew of previously. The world around Bakhtin had become complex (he often uses *complex* in his descriptions of the polyphonic novel and of the Einsteinian universe), and this complexity must be reflected and recognized in the novel—the literature of truth and real life. With polyphony, he constructed a theory of twentieth-century realism, one that is as decentralized, uncertain, and humanistic as the twentieth-century universe.³⁶

Kant and Einstein function for Bakhtin as two critical ways of understanding the world and are the towering poles between which he moves. In formulating a theory of the literary world, he relies on both these thinkers and applies their innovations to his description of the fictional universe. By the end of his career, he had left part of his Kantian self behind and adopted a more symbiotic view of the real and fictional universes. Lurking be-

hind this late Bakhtin (but not absent from the purview of the early Bakhtin) is Einstein and the open-ended, relativistic physical universe he uncovered. Over the course of thirty years, Bakhtin gradually realized that the literary worlds he presents function under the presumption of an Einsteinian universe.

Bakhtin is an odd advocate of a relativistic artistic universe, considering that his application of twentieth-century physics is not to the generation of modernist artists and writers directly influenced by it but retrospectively to all world literature that preceded Einstein. Bakhtin’s lack of concern with the boundaries placed on the evaluation of texts of the past is a reflection of his deep belief in the sanctity of the individual reader’s point of view. His abiding interest in viewing a text from this outside perspective is precisely what enables him to shift from a Kantian to an Einsteinian worldview. He elevates and prioritizes readers and in doing so argues for their right to impose their own reality on the artistic worlds they are experiencing. It is the duty of good readers and critics to apply this reality to the text and recognize the coincidence of these worlds. Bakhtin did so instinctively from the start of his career as a reader imbued with an appreciation of both the realm of aesthetics and that of relativity. The realization of the importance of the revolutionary uniqueness of an Einsteinian universe came to him fairly late, but he nevertheless recognized it to be a fundamental part of his epistemology, a step that all modern readers must take. Einstein was a great reader of the universe, able to see something hitherto unnoticed. Bakhtin admired such talented readers and strove to be one himself. It is thus no surprise that he read well-traversed texts as no one had before. Einstein’s model of the universe provided him, a profound reader and discoverer in his own right, with the means of reconciling a deep-rooted sense of modernity with a belief in the boundlessness of the literary world.

NOTES

I would like to thank Eric Naiman for his invaluable help and patience with this article. Unattributed translations are mine.

1. Книга и революция 9-10 (1922): 29–34; 11-12 (1923): 26–32. For a typical example from *Red Virgin Soil*, see Timirjazev.

2. Mayakovsky's statement, "приветственное радио – науке будущего от искусств будущего," is quoted by Roman Jakobson (20).

3. Zamyatin's ardently future-oriented consideration of Einstein (966) is in his 1924 essay "On Literature, Evolution, and Entropy" ("О литературе, революции и энтропии").

4. Michael Holquist elaborates on the debt Bakhtin owes to Einstein in developing what for Holquist is Bakhtin's main epistemological position, "dialogism" (20–23, 155–62). Gary Saul Morson and Caryl Emerson have also taken Einstein into consideration in their treatment of Bakhtin's concept of the chronotope (366–69).

5. Bakhtin's understanding of discovery as the realization of an alternative view of the world allies his reader-centric epistemology with Thomas Kuhn's model of paradigm shifts (111–35).

6. Einstein's three important works of 1905 were all published in *Annalen der Physik*, volume 17. Arthur Miller gives a technical explication of those papers in his *Albert Einstein's Special Theory of Relativity* and a layperson's outline of them in *Einstein, Picasso* (189–200). Einstein produced a manuscript on the special theory of relativity in 1912 but first published a systematic overview of relativity theory only in 1916.

7. Einstein arrived at his conclusions through the atypical means of thought experiments. Many of these tested the limits of synchronized clocks and deduced that events that appear simultaneous in one reference system do not appear so in other reference systems. Therefore, when two beams of light projected into the air at the same moment are observed from multiple points of view, the two beams may not be measured as initiating simultaneously.

8. Roger Friedland and Deirdre Boden's broad empirical application of the intermingling of space and time inescapable in a post-Einsteinian world posits novel spatiotemporality as a requisite element of all modern spheres of knowledge. In their usage, modernity itself depends on a relativistic universe (33).

9. A common approach to incorporating Einstein into twentieth-century arts and literature calls for delineating the modern through the breakdown of traditional beliefs and views of the world. Pablo Picasso exploring cubism and James Joyce seized by the stream of consciousness have become typical heroes of such accounts. Arthur Miller's assertion of the parallel development of cubism and relativity follows through on the notion of epistemic trauma by proposing comparable intellectual biographies for Picasso and Einstein (*Einstein*). The modern period

has been defined not only by parallel histories but also by the confluence of advances and transformations that set its thinkers apart from the previous generation. In illustrating the vast array of cultural, scientific, and philosophical factors surrounding the birth of the stream of consciousness, Stephen Kern defines a traumatic rupture with traditional views of space and time that accounts for the products of modernity (26–29). Linda Henderson finds the rupture with tradition that initiated modern art to originate with non-Euclidian geometries. By Bakhtin's time, these geometries (in which time now served as the fourth dimension) would be associated most strongly with relativity. The Russian Hermann Minkowski's four-dimensional geometric illustrations of relativity graphically accomplished this fusion (Henderson 241–45).

10. Examples of arguments for can be found in Semkovsky, of arguments against in the collection of articles *The Theory of Relativity and Materialism* (Теория относительности и материализм [1927]).

11. In *Questions of Philosophy*, see Karpov; Naan; Kuranov; Štern; and Bloxincev. See also Graham 111–38.

12. Anne Nesbet and Eric Naiman have discussed the chronotope essay (written in the bloodiest year of the Stalinist terror) as the intersection of the personal and the political in Soviet discourse. See also Ryklin.

13. Einstein pointedly rejected the premise of an arbitrary universe in his famous dismissal of Heisenberg's uncertainty principle with the declaration that "God does not play dice" (Hoffmann 193).

14. Bakhtin distilled the essence of his views on the role of the literary scholar in his 1971 "Response to the Editorial Staff of *Novy mir*": "Works break through the boundaries of their own time, they live in centuries, that is, in *great time*. . . . The author is a captive of his epoch, of his own present. Subsequent times liberate him from this captivity, and literary scholarship is called on to assist in this liberation" ("*Speech Genres*" 4–5). The original Russian reads, "Произведения разбивают грани своего времени, живут в веках, т.е. в большом времени. . . . Автор – пленник своей эпохи, своей современности. Последующие времена освобождают его из этого плена, и литературоведение призвано помочь этому освобождению" (Собрание 6: 454–55).

15. "[Dialogism] is an attempt to frame a theory of knowledge for an age when relativity dominates physics and cosmology and thus when *non-coincidence* of one kind or another—of sign to its referent, of the subject to itself—raises troubling new questions about the very existence of mind" (17). See also Clark and Holquist, *Mikhail Bakhtin* 57–62 and "Influence."

16. "The physicists' concept of a space-time continuum had actually been recognized by the leading members of the Marburg School as a major challenge to philosophy" (Scholz 166n8).

17. For informed discussions of outsideness, see Emerson 207–42; Brandist, *Bakhtin Circle* 44–50.

18. “Время тоже взято у Канта в единстве субъективного кругозора. Кант берет не только время, в котором производится исчисление (потому что оно не предполагает временный образ). Иное дело музыкальное время, которое сплошь есть временно образ. Только с этим (эстетическим) временем впадает в столкновение теория относительности. Это то пространство и время, в котором строится эстетический образ” (Bakhtin, “Лекции” 72).

19. “Существенную взаимосвязь временных и пространственных отношений, художественно освоенных в литературе, мы будем называть хронотопом (что значит в дословном переводе – «времяпространство»). Термин этот употребляется в математическом естествознании и был введен и обоснован на почве теории относительности (Эйнштейна). Для нас не важен тот специальный смысл, который он имеет в теории относительности, мы перенесем его сюда – в литературоведение – почти как метафору (почти, но не совсем); нам важно выражение в нем неразрывности пространства и времени (время как четвертое измерение пространства). Хронотоп мы понимаем как формально-содержательную категорию литературы (мы не касаемся здесь хронотопа в других сферах культуры)” (“формы” 234–35). The translation, which I modified, comes from *Dialogic Imagination* 84.

20. The term is alternately given as “RaumZeitkoordinaten” and “RaumZeit-Koordinaten,” with a clear hesitation whether or not to capitalize the z. The term in Russian translation was “пространственно-временные координаты” (see Cassirer 88).

21. Ukhtomsky’s work on the chronotope remains unpublished. His notebooks on the subject make explicit connections between his use of the term and Einstein’s (Merkulov 213).

22. Another possible connection among Bakhtin, the natural sciences, and relativity at this period comes in Ivan Kanaev’s article “Contemporary Vitalism” (“Современный витализм”), which Clark and Holquist argue was really written by Bakhtin (*Mikhail Bakhtin* 146). This article appeared in *Man and Nature* (Человек и природа) in 1926 as part of a three-article series along with S. V. Serkov’s “A New Foundation of the Natural Sciences” (“Новый фундамент естествознания”), which opens with a discussion of “old and new physics.”

23. The idea of transference is more explicit in the Russian, where the verb he employs is “перенесем” (lit. “carry over,” trans. here as “borrow”).

24. Moves such as this prompted some of the most critical responses to Bakhtin’s approach to literature. Mikhail Gasparov’s remark that “Bakhtin is the revolt of the self-asserting reader against the pieties imposed on him” (“Бахтин – бунт самоутверждающегося читателя против навязанных ему пиететов”) articulates well one such response (495).

25. A significant additional context for the chronotope is discussed extensively by Alexandar Mihailovic

in his treatment of Bakhtin’s lifelong engagement with Russian Orthodoxy and theological discourse. Bakhtin’s “paradox of diversity within unity” is justified by his practical application of the Chalcedonian formula of “not merged yet undivided” (as pertains to the human and divine hypostases of Christ) (127).

26. “Задачи, которые стоят перед автором и его сознанием в полифоническом романе, гораздо сложнее и глубже, чем в романе гомофоническом (монологическом). Единство эйнштейновского мира сложнее и глубже ньютоновского, это – единство более высокого порядка (качественно иное единство)” (Собрание 5: 357).

27. “Позиция автора – сама диалогическая – перестает быть объемлющей и завершающей. Раскрывается многосистемный мир, где не одна, а несколько точек отсчета (как в эйнштейновском мире). Но разные точки отсчета и, следовательно, разные миры взаимосвязаны друг с другом в сложном полифоническом единстве. Функцию этого сложного единства осуществляет автор (эйнштейновский разум)” (Собрание 5: 367).

28. “Да и сама полифония, как событие взаимодействия полноправных и внутренне не завершенных сознаний, требует иной художественной концепции времени и пространства; употребляя выражение самого Достоевского, «неэвклидовой» концепции” (Собрание 6: 199).

29. “Достоевский создал как бы новую художественную модель мира, в которой многие из основных моментов старой художественной формы подверглись коренному преобразованию” (Собрание 6: 7).

30. The term with which Bakhtin characterizes this critical failure to appreciate Dostoevsky’s polyphony is “остаётся нераскрытым,” which appears at the end of the quotation given in note 31.

31. “Большинство критических и историко-литературных работ о [Достоевском] до сих пор еще игнорируют своеобразие его художественной формы и ищут это своеобразие в его содержании. . . . Но ведь при этом неизбежно обедняется и само содержание: в нем утрачивается самое существенное – то новое, что увидел Достоевский. Не понимая новой формы видения, нельзя правильно понять и то, что впервые увидено и открыто в жизни при помощи этой формы. . . . Каждый по-своему толкует последнее слово Достоевского, но все одинаково толкуют его как одно слово, один голос, один акцент, а в этом как раз коренная ошибка. Надсловесное, надголосное, надакцентное единство полифонического романа остаётся нераскрытым” (Собрание 6: 54–55). (For the 1929 version, see 2: 42.)

32. “На самом деле несовместимейшие элементы материала Достоевского распределены между несколькими мирами и несколькими полноправными сознаниями, они даны не в одном кругозоре, а в

нескольких полных и равноценных кругозорах, и не материал непосредственно, но эти миры, эти сознания с их кругозорами сочетаются в высшее единство, так сказать, второго порядка, в единство полифонического романа. Мир частушки сочетается с миром шиллеровского дифирамба, кругозор Смердякова сочетается с кругозором Дмитрия и Ивана. Благодаря этой *разномирности* материал до конца может развит свое своеобразие и специфичность, не разрывая единство целого и не механизуя его. *Как бы разные системы отсчета объединяются здесь в сложном единстве эйнштейновской вселенной (конечно, сопоставление мира Достоевского с миром Эйнштейна – это только сравнение художественного типа, а не научная аналогия)* (Собрание 6: 22; cf. 2: 22–23).

33. As Bakhtin succinctly stated in his “Notes Made in 1970–71,” “To understand a given text as the author himself understood it. But our understanding can and should be better” (“*Speech Genres*” 141). The Russian is “Понимать текст так, как его понимал сам автор данного текста. Но понимание может быть и должно быть лучшим” (Эстетика 346).

34. “[P]адость смен и веселая относительность” (Собрание 6: 180).

35. “*Научное* сознание современного человека научилось ориентироваться в сложных условиях «вероятностной вселенной», не смущается никакими «неопределенностями», а умеет их учитывать и рассчитывать. Этому сознанию давно уже стал привычен эйнштейновский мир с его множественностью систем отсчета и т.п. Но в области *художественного* познания продолжают иногда требовать самой грубой, самой примитивной определенности, которая заведомо не может быть истиной.

“Необходимо отрешиться от монологических навыков, чтобы освоиться в той новой художественной сфере, которую открыл Достоевский, и ориентироваться в той несравненно более сложной *художественной модели мира*, которую он создал” (Собрание 6: 300).

36. This quality of Bakhtin's work has fed the “battle for Bakhtin” (Markovich 39), which is still raging, most recently in an extended series of articles in the leading Russian philological journal *Новое литературное обозрение* (79 [2006]). Mark Lipovetsky and Irina Sandomirskaya argue for Bakhtin's place among poststructuralists (which calls for a preference for the “relative” Bakhtin over the “canonized” Bakhtin [8]), while Brandist, representing the growing attention paid to the Bakhtin circle of intellectuals and critics, expresses the traditionalist point of view that Bakhtin must always be considered in the context of his philosophical roots (“Необходимость”). It is my hope that the current discussion of Bakhtin's assimilation of Einsteinian relativity provides a middle ground in which Bakhtin can be understood to have made use of an aspect of the physical world to operate simultaneously in the spheres of tradition and novelty.

WORKS CITED

- Bakhtin, Mikhail Mikhailovich. *The Dialogic Imagination*. Ed. Michael Holquist. Trans. Caryl Emerson and Holquist. Austin: U of Texas P, 1981.
- . Эстетика словесного творчества. Moskva: Iskustvo, 1979.
- . “Формы времени и хронотопа в романе: Очерки по исторической поэтике.” *Вопросы литературы и эстетики*. Moskva: Xudozhestvennaja literatura, 1975. 234–407.
- . “Лекции и выступления М. М. Бахтина 1924–1925 гг. в записках Л. В. Пумпянского.” М. М. Бахтин: Pro et contra. Vol. 1. Ed. D. K. Burlakova. Sankt-Peterburg: Izdatel'stvo Russkogo Xristianskogo gumanitarnogo instituta, 2001. 47–84.
- . *Problems of Dostoevsky's Poetics*. Ed. and trans. Caryl Emerson. Minneapolis: U of Minnesota P, 1984.
- . Собрание сочинений. 4 vols. to date. Moskva: Russkie slovari, 1996–.
- . “*Speech Genres*” and *Other Late Essays*. Ed. Caryl Emerson and Michael Holquist. Trans. Vern W. McGee. Austin: U of Texas P, 1986.
- Bloxincev, D. I. “За ленинское учение о движении.” *Вопросы философии* 1 (1952): 181–83.
- Brandist, Craig. *The Bakhtin Circle: Philosophy, Culture and Politics*. London: Pluto, 2002.
- . “Необходимость интеллектуальной истории.” *Новое литературное обозрение* 79 (2006): 56–68.
- Cassirer [Kassirer], E. Теория относительности Эйнштейна. Trans. E. S. Berlovič and I. Ja. Kolubovskij. Petrograd: Nauka i škola, 1922.
- Clark, Katerina, and Michael Holquist. “The Influence of Kant in the Early Work of M. M. Bakhtin.” *Literary Theory and Criticism: Festschrift Presented to René Wellek in Honor of His Eightieth Birthday*. Vol. 1. Ed. Joseph Strelka. Bern: Lang, 1984. 299–313.
- . *Mikhail Bakhtin*. Cambridge: Harvard UP, 1984.
- Crawford, Donald. *Kant's Aesthetic Theory*. Madison: U of Wisconsin P, 1974.
- Egorov, V. F. “Диалогизм М. М. Бахтина на фоне научной мысли 1920-х годов.” М. М. Бахтин и философская культура XX века. 1st ed. Pt. 1. Sankt-Peterburg: Obrazovanie, 1991. 7–17.
- Einstein, Albert. *Einstein's 1912 Manuscript on the Special Theory of Relativity: A Facsimile*. New York: Braziller, 1996.
- Emerson, Caryl. *The First Hundred Years of Mikhail Bakhtin*. Princeton: Princeton UP, 1997.
- Friedland, Roger, and Deirdre Boden. “NowHere: An Introduction to Space, Time, and Modernity.” *NowHere: Space, Time, and Modernity*. Ed. Friedland and Boden. Berkeley: U of California P, 1994. 1–60.
- Gasparov, M. L. “М. М. Бахтин в русской культуре XX века.” *Избранные труды*. Vol. 2. Moskva: Jazyki russkoj kul'tury, 1997. 494–96.

- Graham, Loren. *Science and Philosophy in the Soviet Union*. London: Lane, 1971.
- Henderson, Linda Dalrymple. *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*. Princeton: Princeton UP, 1983.
- Hoffmann, Banesh. *Albert Einstein: Creator and Rebel*. New York: New Amer. Lib., 1972.
- Holquist, Michael. *Dialogism: Bakhtin and His World*. New York: Routledge, 1990.
- Jakobson, Roman. "О поколении, растративших своих поэтов." *Смерть Владимира Маяковского*. The Hague: Mouton, 1975. 8–34.
- Капаев, I. "Современный витализм." *Человек и природа* 1 (1926): 33–42; 2 (1926): 10–22.
- Карпов, М. М. "О философских взглядах А. Эйнштейна." *Вопросы философии* 1 (1951): 130–41.
- Kern, Stephen. *The Culture of Time and Space, 1880–1918*. Cambridge: Harvard UP, 1983.
- Kolyškin, N. I., ed. *Беседы В. Д. Дувакина с М. М. Бахтиным*. Moskva: Izdatel'skaja grupa "Progress," 1996.
- Kuhn, Thomas. *The Structure of Scientific Revolutions*. 3rd ed. Chicago: U of Chicago P, 1996.
- Kursanov, K. A. "К критической оценке теории относительности." *Вопросы философии* 1 (1952): 169–74.
- Lavrov, A. V. *Андрей Белый в 1900-е годы*. Moskva: Novoe literaturnoe obozrenie, 1995.
- Lipovetskij, Mark, and Irina Sandomirskaja. "Как не «завершить» Бахтина?" *Новое литературное обозрение* 79 (2006): 7–38.
- Markovich, V. "О Бахтине «подлинном» и Бахтине «реальном»." *Новое литературное обозрение* 79 (2006): 39–49.
- Merkulov, V. L. "Принцип доминанты и представления А. А. Ухтомского о хронотопе." *Успехи современной биологии*. 47.2 (1959): 204–19.
- Mihailovic, Alexandar. *Corporeal Words: Mikhail Bakhtin's Theology of Discourse*. Evanston: Northwestern UP, 1997.
- Miller, Arthur I. *Albert Einstein's Special Theory of Relativity: Emergence (1905) and Early Interpretation (1905–1911)*. Reading: Addison, 1981.
- . *Einstein, Picasso: Space, Time, and the Beauty That Causes Havoc*. New York: Basic, 2001.
- Morson, Gary Saul, and Caryl Emerson. *Mikhail Bakhtin: Creation of a Prosaics*. Stanford: Stanford UP, 1990.
- Naan, G. I. "К вопросу о принципе относительности в физике." *Вопросы философии* 2 (1951): 57–77.
- Nesbet, Anne, and Eric Naiman. "Формы времени в «Формах времени. . .»" *Новое литературное обозрение* 2 (1993): 90–109.
- Ryklin, Mikhail. "Тела террора (тезисы к логике насилия)." *Бахтинский сборник I*. Ed. D. Kujundžić and V. L. Makhlin. Moskva: Prometei, 1990. 60–76.
- Scholz, Bernhard. "Bakhtin's Concept of 'Chronotope': The Kantian Connection." *The Contexts of Bakhtin: Philosophy, Authorship, Aesthetics*. Ed. David Shepherd. Amsterdam: Harwood Acad., 1998. 141–72.
- Semkovskij, S. Iu. *Диалектический материализм и принцип относительности*. Moskva: n.p., 1926.
- Serkov, S. V. "Новый фундамент естествознания." *Человек и природа* 1 (1926): 42–50; 2 (1926): 1–10; 3 (1926): 1–8.
- Shlain, Leonard. *Art and Physics: Parallel Visions in Space, Time, and Light*. New York: Perennial, 1991.
- Štern, V. "К вопросу о философской стороне теории относительности." *Вопросы философии* 1 (1952): 175–81.
- Теория относительности и материализм. N.p.: n.p., 1927.
- Timirjazev, A. "Принцип относительности: О теории Эйнштейна." *Красная новь* 2 (1921): 144–59.
- Vargish, Thomas, and Delo Mook. *Inside Modernism: Relativity Theory, Cubism, Narrative*. New Haven: Yale UP, 1999.
- Zamjatin, Evgeni. *Зеленый ветер*. Voronež: E. A. Bolxovitinova, 2001.