

“THE EINSTEIN OF ENGLISH FICTION”: JAMES JOYCE, THE NEW
PHYSICS, AND MODERNIST PRINT CULTURE

by

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Abstract

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There is a substantial field of scholarship addressing the incorporation of Albert Einstein's relativity theories into the structural and thematic aspects of James Joyce's later work. Those studies tend to be based on the assumption that the theories were “in the air” after their publication in 1905 and 1916. In contrast, this dissertation examines the continuity of thought about the novel and science before and after Einstein's emergence in the periodical cultures where Joyce's work appeared. Chapter 1 surveys the discourse of science and the novel in *The Egoist* and *The Little Review* from 1914 to 1918, tracing the rise in importance given to the novel in avant-garde circles due to its supposedly scientific nature. Parallel to that rise is the development of camps of thought about “non-materialist” science, which was perceived to restore individualism and self-determination to humanity. Chapter 2 examines the serialization of *Ulysses* alongside various source texts that are found to have been used in its pre-publication materials. In that way, ideas that directly affected the development of the “Wandering Rocks” and “Ithaca” episodes are shown to merge with a burgeoning awareness of relativity, including a series of mid-1918 articles by Dora Marsden in *The Egoist* that predate Einstein's popularization at the end of 1919. These two episodes, as well as the mythic method of *Ulysses*, bear structural

relationships in accord with aspects of Einstein's theories that were discussed in the periodicals to which Joyce contributed and in other materials that he read. Chapter 3 recontextualizes *Finnegans Wake* in both the mainstream popular science culture and the inter-war avant-garde, elucidating relationships between the two that have not hitherto been discussed in Joyce scholarship. The conversation among Joyce, his colleagues at *transition*, and Wyndham Lewis in *The Enemy* arises specifically in response to the British popular science industry and influences several core episodes of *Finnegans Wake*. In examining the relationships between Joyce's later work and popular science, we can fill in a piece of the puzzle that is modernism's relationship to the new physics and, simultaneously, the history of the novel.

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TABLE OF CONTENTS

INTRODUCTION	I
CHAPTER 1: SCIENCE AND THE NOVEL IN THE PRE-WAR AND WARTIME	
AVANT-GARDE, 1914-1918	13
The Pound Connection	14
Science, Liberation, and the End of the Novel in <i>The Egoist</i>	35
Science and Experimental Fiction in <i>The Little Review</i>	79
Conclusion	88
CHAPTER 2: <i>ULYSSES</i> AND EINSTEIN IN THE WARTIME AND POST-WAR	
AVANT-GARDE, 1918-1921	89
The Scientific Context of "Wandering Rocks"	91
The Relativistic Space-Time of "Wandering Rocks"	95
A Textual Analysis of "Wandering Rocks"	101
Dora Marsden, Physics, <i>The Egoist</i> , and <i>The Little Review</i>	106
"Ithaca" and Post-Euclidean Geometry after Einstein's Public Entrée	123
Conclusion	142
CHAPTER 3: <i>FINNEGANS WAKE</i> AND POPULAR SCIENCE IN THE INTER-WAR	
MAINSTREAM AND AVANT-GARDE, 1923-1939	143
Science and Aesthetics in <i>The Enemy</i> and <i>Work In Progress</i>	151
Popular Science, Modernist Literature, and Readerships	182
Conclusion	195
CONCLUSION	197
APPENDIX: A TABLE OF JOYCE'S READING	199
BIBLIOGRAPHY	252

Introduction

Stanislaus Joyce was perhaps the keenest critic of his older brother James, knowing him with a closeness that few others did. As a devoted sibling since their earliest days—and not always by choice—Stanislaus often thought and wrote about James' personality as it tempered his writerly acumen. The following passage from *My Brother's Keeper* therefore speaks volumes about the older brother's career.

When we were both very young and my brother was still in the thrall of the big words, I wrote in my diary in bungling schoolboy fashion that there are scientists whose work is concerned with infinite stellar spaces and who are hailed as great, and others deemed no less great whose work is at the end of a microscope. I opined that on a far smaller scale an analogous difference existed between writers, and that my brother would belong to the latter class. He used to read my diary without permission and be rather jocular about it, but he said, when he read this entry, he thought I might be right. (34)

True to Stanislaus' prediction, the fiction of James Joyce has been known for its microscopic insight into the self, the nature of consciousness, and the contours of the family; it has been known equally for its telescopic observation of modernity, the mechanics of city and national life, and the symbolic patterns of universal human experience that imprint themselves upon everyday life. This particular blend of psychological and social realism with a symbolic mysticism no doubt owes its existence to late Nineteenth-Century trends in fiction and poetry. Joyce's later work continues the tradition of the Flaubertian realist novel, which presents an “accurate” depiction of human motivations within the context of the entire milieu. *Ulysses*, like *Bouvard et Pécuchet*, portrays its social and intellectual environment, high, middle, and low alike, in the form of a humorous epic, but as seen directly through the minds of its antagonists. However, as many of Joyce's contemporaries note, *Ulysses* has more structure and more emotive force than the novels of Flaubert. That is in part because Joyce turned to many kinds of sources

for that structure, including Homer's *Odyssey* and the methods of various arts and sciences. *Finnegans Wake* brings that model a step further by rebuilding the entirety of myth and thought upon a cyclical structure derived, in part, from Vico's theory of history, but also drawing upon models reconciling opposites, such as Albert Einstein's relativity theories, which merge space and time, matter and energy. While *Finnegans Wake* has none of the realism or centralized plot of Flaubert, there is nonetheless a continuity in the drawing upon science as either a thematic or structural principle of the novel.

These two nodes, science and the novel, have been linked since the mid-Nineteenth Century. While the novel had been considered a low-brow genre suitable for women and girls, its rise in literary esteem owes something to the development of the “serious” realist novel that presents a “scientific” study of social conditions or of an individual. Such novels are often based, in part, on Darwin's biological theory of evolution by natural selection. The naturalist movement, an outgrowth of the realist novel, in fact takes its name from biological science, and frequently explores the psychological development of individuals exposed to harsh and debased living conditions. By the early Twentieth Century, the deterministic view expressed in most realist and naturalist novels met with distaste from the younger generation of writers who by that time were seeking liberation from the strictures of Victorian culture. Novelists began to explore new sensibilities, alternative social relationships, and characters who “win” by opting out of traditional institutions. In that environment, certain sciences came to be seen as an oppressive force within the dominant culture, while other, newer sciences, such as Bergson's psychological philosophy, were seen as liberating in that they restored human agency to the state of affairs. In that way, the psychological turn of much early Twentieth-Century fiction is

indebted to the theories of Bergson, and the novel became the site of renewed focus for literary innovation, bearing with it a striving for liberation.

The relativity theories of Albert Einstein constituted the salient scientific development of Joyce's day. The special theory of relativity was published in 1905 and the general theory in 1916. Thus, literary modernism matured alongside the development of these two theories, and much scholarship has attempted to elucidate their relationship. Most criticism has assumed that knowledge of Einstein's theories was inevitable immediately upon their publication. In fact, the relativity theories were almost completely unknown to the public until November 7, 1919, when newspapers around the world reported a presentation given by Arthur Eddington the day before, in which he announced experimental substantiation of the general theory. Einstein's theories, which will be explained below, revolutionized physics and superseded the Newtonian mechanics, which had been accepted as inviolable for nearly three hundred years. Their revolutionary impact was not lost on the press, which sensationalized them amid the other economic and political crises still brewing from the Armistice.

The nature and extent of the correlation between literature and science has been examined in a few general and author-specific studies of the modernist period, yet it is only beginning to solidify as a field within literary studies proper. Several interdisciplinary studies have paved the way for inroads that are now being made in literary scholarship. For example, Stephen Kern's *The Culture of Time and Space: 1880-1919* (1983) is a prominent cultural history surveying the manner in which the experience and conception of time and space were conditioned by revolutionary advances in communication technologies, transportation, the visual and plastic arts, cinema, music, literature, and science. In a similar way, *Inside Modernism:*

Relativity Theory, Cubism, Narrative (1999), by Delo E. Mook and Thomas Vargish, proposes an interdisciplinary method by which modernism can be defined as a set of values and practices in the fields of literature, painting, and physics. In English and literary studies, a trickle of isolated articles beginning in the 1950s and intensifying in the 1990s has connected aspects of relativity theory to works by such authors as Joseph Conrad, James Joyce, Franz Kafka, T.S. Eliot, Ezra Pound, Virginia Woolf, D.H. Lawrence, Marcel Proust, and William Faulkner, among others.¹ These studies make invaluable connections between structural similarities in disparate fields as well as between individual authors and scientific concepts. However, the methods of these studies have been largely unsatisfactory.

Studies of science and literature tend to fall along two methodical lines: (1) the correlation of structural or conceptual affinities between literary works and scientific concepts that were “in the air” as the result of a universal spirit of the age (*Zeitgeist*) or (2) establishing direct connections between scientific concepts and a specific author who is known to have read about or discussed them (atomistic). The limit of the *Zeitgeist* approach is that it monolithically applies concepts without regard to differences in local or regional cultures. The limit of the atomistic approach is that it establishes concrete connections without regard to their significance within a larger frame of reference. Each of these approaches fails to account accurately for the manner in which science and literature share a common body of material.

1 Some examples include: Donald R. Benson, “Constructing an Ethereal Cosmos: Late Classical Physics and Lord Jim,” *Conradiana: A Journal of Joseph Conrad Studies*, 23:2 (1991 Summer), pp. 133-49; Ole Bay-Petersen, “T. S. Eliot and Einstein: The Fourth Dimension in the Four Quartets,” *English Studies: A Journal of English Language and Literature*, 66:2 (1985 Apr.), pp. 143-155; Paul Edwards, “Relativity of Consciousness in the Aesthetics of Wyndham Lewis and Virginia Woolf,” *Wyndham Lewis Annual*, pp. 9-10; Ronald Bush, “Science, Epistemology, and Literature in Ezra Pound’s Objectivist Poetics (with a Glance at the New Physics, Louis Zukofsky, Aristotle, Neural Network Theory, and Sir Philip Sidney),” *Literary Imagination: The Review of the Association of Literary Scholars and Critics*, 4:2 (2002 Spring), pp. 191-210; Sharon Stockton, “Public Space and Private Time: Perspective in *To the Lighthouse* and in Einstein’s Special Theory,” *Essays in Arts and Sciences*, 27 (1998 Oct), pp. 95-115.

Only recently has the topic of science and modernism been treated in a detailed, comprehensive, and rigorous fashion within literary studies proper. Michael H. Whitworth's *Einstein's Wake: Relativity, Metaphor, and Modernist Literature* (2002) examines the social networks that transmitted metaphors for new scientific concepts that informed original scientific texts, popular science, and modernist literary works. Similarly, Holly Henry's *Virginia Woolf and the Discourse of Science: The Aesthetics of Astronomy* (2003) treats the manner in which Woolf's writing was part of her global vision, informed by popular accounts of new scientific theories. These studies use a historicist method to highlight the material context in which scientific ideas emerged among networks of readers and in which certain modernist developments took place.

Whitworth synthesizes the *Zeitgeist* and atomistic approaches with a method that he describes metaphorically as a "field of force." The field of force

has the advantage that it allows us to model both dissemination and impermeability. For the model to be useful, we must understand the field of force as being propagated through a heterogeneous, discontinuous medium: in certain places, there are material obstructions which attenuate its full force." (18).

It "forces us to map the medium of propagation, noting the material paths through which the ideas could have been transmitted: we cannot assume that an entire society would have been saturated uniformly in the new knowledge" (18). Part of the "field of force" method entails examination of critical writings on science and literature at the time the modernists were writing their works. Whitworth examines the generalist and popular periodicals alongside the literary works and little magazines in which many appeared, giving equal weight to all.² He traces the use of metaphors to describe new and difficult scientific concepts in articles on, say,

² The generalist and literary periodicals studied by Whitworth and Henry include *The Nation*, *The Athenaeum*, *The Nation and Athenaeum*, *The Listener*, *The Criterion*, *The New Statesman*, and *The Times Literary Supplement*; the books include Arthur Eddington's *The Nature of the Physical World*, James Jeans' *The Mysterious Universe*, and J.W.N. Sullivan's *Aspects of Science*.

relativity and ether theories, which appeared alongside poems, serial fiction, and cultural essays. In that way, he is able to demonstrate the genealogy of specific metaphors as they participate in the discourse of particular intellectual communities and enter the works of the modernist authors who read those journals and popular science books. This means that in the study of science and literature, some authors are relevant to particular scientific concepts and their attendant humanist or philosophical issues, whereas others are either irrelevant or arrived at the same issues through a different path. For those reasons, Joyce, for example, who did not contribute to the inter-war periodicals that formed the virtual communities of certain British modernists, is a marginal figure in Whitworth's study.

This dissertation essentially picks up where Whitworth leaves off. As Whitworth notes, "[t]hough my title glances at James Joyce, he is less prominent than might be expected, because he was less closely connected with the literary periodicals I have examined, and because, compared to Eliot and Woolf, he was unproductive as a critic and theorist" (viii). This study will use the "field of force" method to show that Joyce was actually well connected to the British periodical and popular science presses, and that they significantly influenced the development of *Ulysses* and *Finnegans Wake*. It will examine some of the same co-texts as Whitworth and Henry for connections between the humanistic issues of popular science and literary works after 1919. However, it will expand on their studies by examining the discourse of science and the novel in the periodicals that serialized *Ulysses* before the popularization of Einstein. This will be done in order to shed light on how that discourse changed—or not—after the introduction of Einstein, as well as why the novel was the primary genre for modernists looking for new formal techniques to express their reactions to modernity.

This study will therefore focus on form as much as on the material context of its developments. The focus on form allows for generalizations because forms are shared, either through deliberate borrowing or unconscious absorption. As well, a formal aspect of a literary work, such as a novel, can be considered in relation to science even if the content of that form is not scientific. This becomes important when we consider that modernists of all stripes—in literature as well as the visual, plastic, and aural arts—sought to create works that were new by merit of their structural autonomy. That is why abstraction and significant form became such a definitive feature of modernism. A central question of this study, therefore, will ask how the narrative forms of Joyce's novels relate to those of the relativity theories.

There is a substantial body of scholarship comparing James Joyce's later work with branches of contemporary physics such as the relativity theories, quantum mechanics, and wave-particle duality. Most of these studies focus on *Finnegans Wake*,³ since it contains numerous

3 John Bishop, "Vico's 'Night of Darkness': The New Science and *Finnegans Wake*," *James Joyce: A Collection of Critical Essays*, Ed. Mary T. Reynolds, New Jersey: Prentice-Hall, 1993: 180-95; Marcel Brion, "The Idea of Time in the Work of James Joyce," Trans. Robert Sage, *Our Exagmination Round His Factification for Incamination of Work In Progress*, 2nd Ed. London: Faber and Faber, 1961: 23-33; Harry Burrell, "Chemistry and Physics in *Finnegans Wake*," *Joyce Studies Annual* 7 (1996): 192-218; Harry Burrell, "Chemistry and Physics in *Finnegans Wake*, Part II," *Joyce Studies Annual* 8 (1997): 185-206; Luca Crispi, "The Mechanics of Creativity: A Generic Study of James Joyce's *Finnegans Wake* II.2," *DAI* 61:12 (2001): 4768; Edward J. Cronin, "'Science Bites the Dust'. An Analysis of FW: 415.15-19," *A Wake Newslitter: Studies in James Joyce's Finnegans Wake* 15 (1978): 24-7; Andrzej Duszenko, "The Joyce of Science: New Physics in *Finnegans Wake*," *DAI* 51:3 (1990): 861A; Andrzej Duszenko, "The Joyce of Science: Quantum Physics in *Finnegans Wake*," *Irish University Review: A Journal of Irish Studies* 24:2 (1994): 272-82; Andrzej Duszenko, "The Relativity Theory in *Finnegans Wake*," *James Joyce Quarterly* 32:1 (1994 Fall): 61-70; Michael Emanuel Goldberg, "Moving Bodies: James Joyce and the 'Newphysics'," Diss. U of Illinois Urbana-Champaign, 2000; Michael Langdon, "Some Reflections of Physics in *Finnegans Wake*," *James Joyce Quarterly* 17 (1980): 359-77; Margot Norris, *The Decentered Universe of Finnegans Wake: A Structuralist Analysis*, Baltimore: Johns Hopkins UP, 1976; David Overstreet, "Oxymoronic Language and Logic in Quantum Mechanics and James Joyce," *Sub-stance* 28 (1980): 37-59; Elliot Paul, "Mr. Joyce's Treatment of Plot," *Our Exagmination Round His Factification for Incamination of Work In Progress*, 2nd Ed. London: Faber and Faber, 1961: 129-37; S. B. Purdy, "Let's Hear What Science Has to Say: *Finnegan's Wake* and the Gnosis of Science," *The Seventh of Joyce*, Ed. Bernard Benstock. Bloomington: Indiana UP, 1982; Thomas Jackson Rice, *Joyce, Chaos, and Complexity*, Urbana: U of Illinois P, 1997; Dirk Vanderbeke, "Physics, Rhetoric, and the Language of *Finnegans Wake*," *The Languages of Joyce: Selected Papers from the 11th International James Joyce Symposium*, Venice, 12-18 June 1988, Eds. Rose Maria Bollettieri Bosinelli, C. Marengo Vaglio and Chr. van Boheemen, Philadelphia: Benjamins, 1992: 249-64. Further quotations will be cited parenthetically in the text.

references to Albert Einstein and also embodies the space and time debate of the mid-1920s between Joyce, Wyndham Lewis and Ezra Pound. There is also a fair amount of scholarship on *Ulysses* and physics,⁴ which tends to compare the novel's metaphysics with those of Einstein's theories or to address the scientific content of the "Ithaca" episode. Nearly all of these studies take the *Zeitgeist* approach and therefore commit errors based on anachronism due to the absence of material connections.

No study of Joyce and science has yet to examine the print culture in which *Ulysses* and *Finnegans Wake* emerged. The rise of periodical studies in the field of modernism is a helpful boon to this study because there is such a rich and diverse response to Einstein in all cultural forms and strata. Articulating Joyce's position within that material context will enable us to see specifically how and why the humanistic response to the new theories of time and space were so important to Joyce's work.

On November 6, 1919, Arthur Eddington addressed a joint meeting of the Royal and Royal Astronomical Societies to announce the first experimental substantiation of the general theory of relativity. On the next day, newspapers transmitted to the general public a shocking

4 M. Keith Booker, "Joyce, Planck, Einstein, and Heisenberg: A Relativistic Quantum Mechanical Discussion," *James Joyce Quarterly* 27:3 (1990): 577-586; Joseph A. Buttigieg, "The Struggle against Meta (Phantasma)-Physics: Nietzsche, Joyce and the 'Excess of History'," *Boundary 2: An International Journal of Literature and Culture* 9:3 (1981): 187-207; Avrom Fleishman, "Science in Ithaca," *Wisconsin Studies in Contemporary Literature* 8:3 (1967): 377-91; Alan J. Friedman, "Ulysses and Modern Science," *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 198-206; Michael Partrick Gillespie, "(Meta)physics and 'the Portals of Discovery': Literary Criticism and the New Physics," *James Joyce Quarterly* 34:4 (1997): 597-612; John Hannay, "The Throwaway of 'Wandering Rocks'," *James Joyce Quarterly* 17 (1980): 437; Ihab Hassan, "Joyce and the Gnosis of Modern Science," *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 185-190; Alan David Perlis, "The Newtonian Nightmare of *Ulysses*," *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 191-197; David W. Robinson, "Stephen Dedalus' Physics Lesson," *James Joyce Quarterly* 24:3 (1987): 359-360; Mario Salvadori and Myron Schwartzman, "Musemathematics: The Literary Use of Science and Mathematics in Joyce's *Ulysses*," *James Joyce Quarterly* 29 (1992): 339-55; Stephen Whittaker and Francis X. Jordan, "The Three Whistles and the Aesthetic of Mediation: Modern Physics and Platonic Metaphysics in Joyce's *Ulysses*," *James Joyce Quarterly* 33:1 (1995): 27-47. Further quotations will be cited parenthetically in the text.

set of facts about the universe: an object's rate of time and mass will increase or decrease depending on its velocity; differently moving observers will obtain varying yet equally true measurements of that object's length, width, mass, and velocity; space and time exist on a four-dimensional continuum known as space-time; gravitational attraction is the warping of space-time around bodies, rather than the direct action of forces between them; the universe is in a constant state of expansion; there is no such thing as simultaneity or an absolute chronology; and a minuscule amount of matter can release an enormous amount of energy (embodied in the now-famous equation $E=mc^2$). These notions completely upended the assumptions of Newtonian mechanics, which in the general culture were deemed to be the very basis of civilization itself. Reactions to the new theory varied, but those of an avant-garde bent tended to embrace its revolutionary impact as an opportunity to reevaluate a broad range of humanistic endeavors.

The initial exposition of relativity was not just the announcement of an intellectual breakthrough, but an international political event. As Balibar explains:

Why was this arcane scientific event so celebrated? We must remember that World War I had just ended and Europe was emerging from more than four years of fratricidal slaughter. The fact that British astronomers had verified a German theory was immediately perceived and presented by a number of pacifist, internationally minded journalists as a symbol of peace regained. It was proof that science was capable of transcending nationalisms and could be a factor for peace making. Today such visions seem idealistic and perhaps illusory, but in 1919 the world had not yet become aware of the destructive potential represented by science's mastery of nature. Eddington wrote to Einstein, "It is the best possible thing that could have happened for scientific relations between England and Germany." (70-71)

The spirit of redemption and renewal accompanying the exposition of Einstein continued in areas of the mainstream British press, where the first popular accounts almost universally explained the relativity theories according to their humanistic import.

In addition to the countless articles published in newspapers and generalist periodicals,

a canon of books popularizing Einstein's relativity theories developed from the 1920s through the 1930s. These books include Eddington's *Space, Time and Gravitation* (1920) and *The Nature of the Physical World* (1928), J.W.N. Sullivan's *Aspects of Science* (1925), Bertrand Russell's *The ABC of Relativity* (1925), E.A. Burt's *The Metaphysical Foundations of Modern Physical Science* (1925), A.N. Whitehead's *Science and the Modern World* (1925), and James Jeans' *The Mysterious Universe* (1930).

Amid the post-war confusion and humanistic crisis, these books sought not just to explain advanced physical theories to a generally educated audience, but to reassure the reading public about the integrity of the universe and the human place within it. Eddington's *Space, Time and Gravitation*, for instance, quotes Milton's *Paradise Lost* between the title page and the table of contents.

Perhaps to move
His laughter at their quaint opinions wide
Hereafter, when they come to model heaven
And calculate the stars: how they will wield
The Mighty frame: how build, unbuild, contrive
To save appearances. (v)

The reference to the revolutions of astronomy is no doubt intended to reassure an audience disoriented by the strange tenets of the new theory and international unrest. Eddington makes a further link to the Western tradition by writing the first chapter, titled “What is Geometry?,” in the form of a Socratic dialogue between an experimental physicist, a pure mathematician, and a “RELATIVIST, who advocates the newer conceptions of time and space in physics” (1). Sullivan's book expresses a similar humanistic ethos, where he states that “[s]cientific ideas have a history; they arose to satisfy certain human needs; to see them in their context is to see them as part of the general intellectual and emotional life of man” (5). The first chapter of Russell's book, “Touch and Sight: The Earth and the Heavens,” attempts to restore the human

sense of connectedness to the universe through a long explanation of how scientific methods evolved from analogous relationships between the human body and the physical world (i.e. the “foot,” the “cubit,” and the “span”). Russell's conclusion also seeks to instill calm, as the “consequences of relativity are neither so great nor so startling as is sometimes thought” (219). The other books are replete with similar examples, and they point to an emerging sense in inter-war British print culture that science and literature work toward the same truths and the same reality. Joyce was by no means unaware of or immune to these trains of thought.

The chapters that follow are organized in such a way as to demonstrate the continuity of thought about the novel and science before and after Einstein's emergence in the literary culture where Joyce's work first appeared. Chapter 1 surveys the discourse of science and the novel in *The Egoist* and *The Little Review* from 1914 to 1918, tracing the rise in importance given to the novel in avant-garde circles due to its supposedly scientific nature. Parallel to that rise is the development of camps of thought about “non-materialist” science, which was perceived to restore individualism and self-determination to humanity. Chapter 2 examines the serialization of *Ulysses* alongside various source texts that are found to have been used in its pre-publication materials. In that way, ideas that directly affected the development of “Wandering Rocks” and “Ithaca” are shown to merge with a burgeoning awareness of Einstein's relativity, including a series of articles by Dora Marsden in *The Egoist* that predate his popularization. These two episodes, as well as the mythic method of *Ulysses*, bear structural relationships with Einstein's theories because they were discussed in the periodicals to which Joyce contributed and in other materials that he studied. Chapter 3 recontextualizes *Finnegans Wake* in both the mainstream popular science culture and the inter-war avant-garde, elucidating relationships between the two

that have not hitherto been discussed in Joyce scholarship. The dialogue among Joyce, his colleagues at *transition*, and Wyndham Lewis in *The Enemy* arises specifically in response to the popular science industry and influences several core episodes of *Finnegans Wake*. In examining the relationships between Joyce's later work and popular science, we can fill in a piece of the puzzle that is modernism's relationship to the new physics and, simultaneously, the history of the novel.

Chapter 1: Science and the Novel in the Pre-War and Wartime Avant-Garde, 1914-1918

“Now that the novel is wider and deeper, now that it begins to be the serious, passionate, living great-form of literary study and of social research, now that it has become, by analysis and psychological inquiry, the history of contemporary ethics-in-action (how shall one render accurately the phrase ‘l’histoire morale contemporaine?’), now that the novel has imposed upon itself the studies and duties of science, one may again make a stand for its liberties and its privileges.”

— Edmond de Goncourt, introduction to *Germinie Lacerteux*, quoted and translated by Ezra Pound, “Meditatio,” *The Egoist* 3.3 (March 1, 1916): 37-38.

An emphasis on the Flaubertian realist novel merged with a treatment of modern science in the journals where the novels of James Joyce were serialized. Before and during the serialization of *Ulysses* in *The Egoist* (London) and *The Little Review* (New York), these two magazines featured a variety of content that connected various disciplines in a humanistic program of social and aesthetic renewal influenced by the individualist philosophy of Friedrich Nietzsche. Science was just one part of that program, more prominent in *The Egoist* than in its American sister magazine, yet it was a continuous and important one. Nonetheless, across the two magazines there is a persistent connection of realist prose to science, which affected the conception of the novel's purpose as a genre, especially in light of the disillusionment and shocking new insights brought on by the Great War. For contributors of these two magazines, the problem of the literary tradition was at the forefront. The need for innovation was seen as a problem of clear language and clear thought. Science was considered to be one mode of thought that could be imported to attune readers to what is real and to move literature out from under the chains of traditional genres. In that way, a work like *A Portrait of the Artist as a Young Man* is not only about

Stephen Dedalus' escape from the oppression of Victorian culture, but about the novel's escape from genres like the *Bildungsroman*.

In avant-garde culture, the need for literary form to mimic its content was seen as paramount in developing works that were long-lasting and autonomous. Science came to be seen as a guiding principle of realism for allowing the novel to embody the “true” forms of life.

The problematics of that belief can be traced in the voluminous discourse of science and the novel in the pre-war and wartime numbers of *The Egoist* and *The Little Review*. Among the primary themes of that discourse are that the novel needs to constitute a new blend of emotional vitality and realism, alongside an interest in “new” sciences that are perceived to be less materialistic—meaning less deterministic—than the “old” sciences of Newton and the Victorians. This chapter will survey that discourse in order to establish the particular material context to which Joyce responded as he began writing *Ulysses*. It will examine the state of the field before *Ulysses* came to be serialized and before the clandestine discussion of Einstein that began in *The Egoist* during mid-1918, which will be fully addressed in the next chapter. Joyce was published in both magazines through the agency of Ezra Pound, who was trying to organize a transatlantic literary revolution to bring English literature forward.

The Pound Connection

From 1915 through the mid 1920s, the novel found an unlikely champion in the poet Ezra Pound. Pound's critical essays on Joyce form a theory of the novel that developed literally alongside creative and critical pieces in several periodicals. It is worth examining Pound's writings on Joyce not only because they form a unified discourse on issues confronting the

novel before the popularization of relativity, but because they also serve as a marker for that discourse as it occurred in several periodical networks. Joyce, being a protégé of Pound, read most of the articles as they arrived in the issues of *The Egoist* and *The Little Review* or were sent to him directly from the poet and other friends. Since he was working on *Ulysses* during that time and also keeping a lively correspondence with Pound, their relationship had a bearing on his development.

After Pound initiated contact with Joyce at the end of 1913, the two began a correspondence in which Joyce sent along manuscripts of *Dubliners* and *A Portrait of the Artist as a Young Man*. Pound was impressed with the clarity of *Dubliners*' realistic prose and mesmerized by the *Portrait*, particularly the ending. While there are hints of Pound's appreciation in his letters to Joyce, it was in his article "The Non-Existence of Ireland" in the February 25, 1915 number of the socialist magazine *The New Age* that he began to articulate the importance of the fact that Joyce "writes with a clear hardness, accepting all things, defining all things in clean outline" (Read 33). The question of genre becomes integral in formulating his view of a new literature.

Often we find a writer who can get a certain delusive sense of "power" out of "strong" situations, or by describing rough life. Mr. Joyce is not forced into this. He presents his people regardless of "boreness," regardless of their not being considered "romantic" or "realistic" material. And when he has written they stand so that the reader says to himself, "this thing happened"; "this is not a magazine story made to please some editor, or some current taste, or to 'ring a bell in the last paragraph.'" His work is not a mode, not a literary endeavour. (Read 33)

What Pound values in Joyce's fiction is its non-identification with any particular genre, which somehow enables the direct presentation of reality, to show that "this thing happened." He makes clear that this is not "realism" in the traditional sense, now clearly identifiable as a genre and therefore a literary mode and device, but rather something that stands on its own unique terms and is true unto and within itself. Pound is articulating what we would now say

are the defining characteristics of modern prose: impersonality, a lack of decoration, a focus on the everyday as opposed to the “big ideas,” a lack of authorial voice that comments on events or resolves ambiguities. However, what is significant is that he values Joyce’s “accepting all things,” a willingness to present the wholeness of humanity without filtering it through a stylistic tradition.

The next move in Pound’s thought, which is documented in letters and fully developed in several periodical articles, found the novel to be the best genre for tackling the all-encompassing wholeness and unity necessary for a modern literature. In a letter to Joyce dated September 6-12, 1915, Pound expresses his excitement about the *Portrait* and responds to *Exiles*, confessing that he finds the stage “a gross, coarse form of art” (Read 46). Though wary of the audience’s capacity to engage anything requiring thought, he concedes that “[t]here is no union in intellect, when we think we diverge, we explore, we go away. / When we feel we unite” (Read 46). He acknowledges that *Exiles* has unifying form and emotion, though not as much as *Portrait*, yet still finds it unfit for the stage. The reason for this is articulated in his essay “Mr. James Joyce and the Modern Stage,” composed immediately after the letter and published in the February 1916 number of *The Drama* (Chicago). The essay’s thesis poses the question of whether drama is worthwhile, whether it is “a form or medium by which the best contemporary authors can express themselves in any satisfactory manner” (Read 49). He repeats the doubts expressed in the letter about the audience’s ability to appreciate a play that penetrates to fundamental questions, yet also finds *Exiles*’ unsuitability for the stage to stem from its method of character development.

It is not so good as a novel; nevertheless it is quite good enough to form a very solid basis for my arraignment of the contemporary theatre. It lays before me certain facts, certain

questions; for instance, are the excellences of this play purely novelist's excellences? Perhaps most of them are; yet this play could not have been made as a novel. It is distinctly a play. It has the form of a play—I do not mean that it is written in dialogue with the names of the speakers put in front of their speeches. I mean that it has inner form; that the acts and speeches of one person work into the acts and speeches of another and make the play into an indivisible, integral whole. The action takes place in less than twenty-four hours, in two rooms, both near Dublin, so that even the classical unities are uninjured. The characters are drawn with that hardness of outline which might compare to that of Dürer's painting if we are permitted a comparison with effects of an art so different. (Read 50)

Pound notes that *Exiles* features a genre-appropriate form with intact classical unities that engender an integral whole. However, the reason the play is unstageable lies in the fact that its characterization is too subtle for the contemporary audience. The play deals in part with the “sentimental bestiality” of adultery—hardly a new subject matter for the time and one that has made other plays quite stageable—yet Joyce’s manner is different. “I admit that Mr. Joyce once mentions a garter, but it is done in such a way... it is done in the only way... it is the only possible means of presenting the exact social tone of at least two of the characters” (Read 51; Pound’s ellipses). Pound’s implication is that the garter is a novelistic detail too finely integrated in the play-text to produce a dramatic effect: “it is untheatrical, or unstageable, precisely because the closeness and cogency of the process is, as I think, too great for an audience to be able to follow... under present conditions” (Read 52). The thesis question of whether drama is worthwhile is then modified in this way:

All of this comes to saying: can the drama hold its own against the novel? Can contemporary drama be permanent? It is not to be doubted that the permanent art of any period is precisely that form of art into which the best artists of the period put their best and solidest work. (Read 52)

The article goes on to consider other dramatic elements such as acting and speech, and to relate them to the cinema, but Pound finishes the piece with thoughts about the novel: “And the question which I am trying to put and which I reform and reiterate is just this: Must our most intelligent writers do this sort of work in the novel, *solely in the novel*, or is it going to be, in

our time, possible for them to do it in drama?" (Read 56, Pound's emphasis). Pound applied this controversial attitude—castigating the genre celebrated by a magazine dedicated to its critique—a little later in the pages of *Poetry*, saying: "James Joyce, by far the most significant writer of our decade, is confining himself to prose" (Read 49). All of this came to saying that the novel had risen to a higher importance than it had enjoyed hitherto, exalted even above other literary genres, and that it is driven partially by the needs of a specialized audience.

Pound's fully developed estimation of the novel played out alongside the difficulties of publishing Joyce's *Portrait* and Wyndham Lewis' *Tarr* (1918) because of their frank content, their "obscenity." The two were serialized in *The Egoist* through the agency of Pound, who also theorized about the novel and other subjects in adjacent pages from 1914 through 1918. In his polemical essay "Meditatio," published in the March 1, 1916 issue of *The Egoist*, shortly after the *Drama* piece, he connects the problems of nationalism and the war with the liberating possibilities of the realistic novel: "Yet it is more desirable that a nation should have a firm literature than that paste-board nonentities should pour forth rehashed Victoriana on Sundays. Waste! Waste, and again, multiplicitly, waste!" (37). Just what this "firm literature" could be is illustrated by way of a quote from Edmond de Goncourt.

Thirteen years ago my brother and I wrote in an introduction to "Germinie Lacerteux":

"Now that the novel is wider and deeper, now that it begins to be the serious, passionate, living great-form of literary study and of social research, now that it has become, by analysis and psychological inquiry, the history of contemporary ethics-in-action (how shall one render accurately the phrase 'l'histoire morale contemporaine?'), now that the novel has imposed upon itself the studies and duties of science, one may again make a stand for its liberties and its privileges." (37)

Pound's full endorsement of the Goncourts' apology for the novel—"If a man has not in the year of grace 1915 or 1916 arrived at the point of enlightenment carefully marked by the

brothers De Goncourt in A.D. 1863, one is not admitted to the acquaintance of anyone worth knowing" (38)—shows that he associates the novel with science both in its cultural hierarchy of "privilege" and the "liberty" stemming from its uncensored revelation of "reality."

This attitude is brought further with another quote from Edmond de Goncourt from 1876, in which he again demands

these privileges for this new book written with the same feeling of intellectual curiosity and of commiseration for human sufferings.

It has been impossible, at times, not to speak *as a physician, as a savant, as a historian*. It would be insulting (*injurieux*) to us, the young and serious school of modern novelists, to forbid us to think, to analyse, to describe all that is permitted to others to put into a volume which has on its cover "Study," or any other grave title. You cannot ask us at this time of day to amuse the young lady in the rail-road carriage. I think we have acquired, since the beginning of the century, the right to write for formed men, without the depressing necessity of fleeing to foreign presses, or to have, under a full republican regime, our publishers in Holland, as we did in the time of Louis XIV and Louis XV. (38, Pound's emphases)

This passage would seem to convey the kind of wholeness and unity that Pound espoused in "Mr. James Joyce and the Modern Stage." The depth and breadth of thought ("intellectual curiosity"), the unifying effect of emotion ("commiseration for human sufferings") are brought together in this genre that, as Pound asserts, also has the privileges and liberties—and gravity—of science. The serious modern novel is a synthetic genre that blends the entirety of the human condition with a rigorous understanding of "actual" conditions, and moreover has since the Nineteenth Century been considered too frank or unsavory for publication in Britain and France.

Pound's implication is that the lack of backbone is symptomatic of the demise of Western Civilization but that through aesthetic and intellectual liberation a better, new order can be created. The role of science in that bipartite liberation is implied in two references to astronomers. Before making his way to the first Goncourt quote, Pound says of the meekness

of the general public and of mainstream publishers:

There are various points of view. The monster of intolerance sniffs like a ghoul about the battlefields even. Flammarion or someone said that the sun was about to explode on, I think it was, February the fifth of this year. The end of the world is approaching. Perhaps.

At any rate I am not the first author to remark that the future is unknowable, or at least indefinite and uncertain. Concerning the past we know a little. Concerning “progress,” how much? (37)

Camille Flammarion (1842-1925) was a French astronomer and popularizer of astronomy. The apocalyptic association of the War, the destruction of Western Civilization, the dangerous state of the universe (though perhaps mentioned here without much seriousness), and the disillusionment with the benchmarks of Victorianism cogently prepare the discussion of liberation to follow.

After the first Goncourt quote, then, Pound summarizes his position with reference to yet another astronomer.

Now in one’s normal mood, in one’s normal existence, one takes it for granted that De Goncourt’s statement is simple, concise, and accurate. One does not meet people who hold any other view, and one goes on placidly supposing that the question is settled, that it is settled along with Galileo’s quondam heresy. (38)

As part of Pound’s usual castigation of the “sleepy” reading public, Flammarion and Galileo are referred to here with some irony. The two pose radical, “dangerous” ideas that upset paradigms of understanding, yet in the case of Galileo, at least, the hard-won acceptance of his ideas over church and state censorship later became a tenet of passive knowledge. However, the insertion of astronomy between the Goncourts’ discussion of psychological and social “science” in the novel would seem to arise from a sense of *total undoing* brought by the War and by “normal” cultural practices. The crises of civilization and humanity in 1915-16 could not have been accurately circumscribed by reference to any other branch of science, since radical advances in astronomy have historically constituted paradigm shifts in all areas of human understanding

(and were usually associated with mass violence). Pound's references here, then, are meant to draw parallels to the necessity for intellectual and scientific liberty for the sake of mass enlightenment, effected through the emotionally and intellectually unifying power of the novel.

Pound's next major volley came on the heels of the publication of *A Portrait* in book form by the Egoist Press. In "James Joyce: At Last the Novel Appears" of the February 1917 number of *The Egoist*, he continued his attacks on censorship and also tied together the need for clear prose and realistic novels—as in the *Portrait*—with the idea of social renewal. The exaggerated tone of the article must perhaps be taken with a grain of salt, but it at least affords a glimpse of how the issues were associated in humanistic discourse. The textual and generic formats comprise the first topic of the essay: "I am very glad that it is now possible for a few hundred people to read Mr. Joyce comfortably from a bound book, instead of from a much-handled file of EGOISTS or from a slippery bundle of typescripts" (21). The marked relief of having the *Portrait* as a unified and whole object after its periodical run becomes even more pronounced when viewed against his later arguments about literature, civilization, and the War.

It is very important that there should be clear, unexaggerated, realistic literature. It is very important that there should be good prose. The hell of contemporary Europe is caused by the lack of representative government in Germany, *and* by the non-existence of decent prose in the German language. Clear thought and sanity depend on clear prose. They cannot live apart. The former produces the latter. The latter conserves and transmits the former. (22, Pound's emphasis)

He goes on to lament—irrationally—"[t]he mush of the German sentence" with its "straddling of the verb out to the end" which forms "part of the befoozlement of Kultur and the consequent hell," for "[a] nation that cannot write clearly cannot be trusted to govern, nor yet to think" (22). As mentioned in his initial letters to Joyce, Pound compares him most closely with Flaubert's realist prose and sees him as essentially completing the French novelist's

project. This leads him to assert that if more Frenchmen had read Flaubert, France “might have been saved a good deal in 1870,” and that likewise if more people had read *Portrait* and *Dubliners*, “there might have been less trouble in Ireland” (22). Similarly, after his comments on the nature of German prose and national politics, he ends the essay with the following:

The terror of clarity is not confined to any one people. The obstructionist and provincial are everywhere, and in them alone is the permanent danger to civilization. Clear, hard prose is the safeguard and should be valued as such. The mind accustomed to it will not be cheated or stampeded by national phrases and public emotionalities.

These facts are true, even for the detesters of literature. For those who love good writing there is no need of argument. In the present instance it is enough to say to those who will believe one that Mr. Joyce's book is now procurable. (22)

While not necessarily explicit, there is a clear sense in this emotional piece that Pound associates the material unity of a book (as opposed to a periodical), to the aesthetic unity of a novel, and the clarity of realist prose with the integrity of civilization.

Pound continued his support of Joyce and the novel through 1918 and into the mid 1920s but stopped when he beheld the first segments of *Work in Progress*. In an article titled “Joyce” in the May 1918 number of *The Future* he reviewed the second edition of *A Portrait* along with a general appreciation of Joyce's *oeuvre*, including *Ulysses*, which was then beginning its serialization in *The Little Review*. On the *Portrait*, Pound again praises the “metallic exactitude” of Joyce's realist prose and the fact that “there is no omission” (Read 136). The growing emphasis on wholeness, “hardness,” unity and a new form in literature is made even more explicit two paragraphs later.

I think that what tires me more than anything else in the writers now past middle age is that they always seem to imply that they are giving us all modern life, the whole social panorama, all the instruments of the orchestra. They have their successors in Lawrence and Gilbert Cannan.⁵ Joyce is of another donation. (Read 136)

After a brief description of *Ulysses*, and how it furthers the realist techniques begun in *Dubliners*

5 Read notes that Cannan was considered one of the stronger novelists of the day and was friends with D. H. Lawrence and John Middleton Murry, connections that will become important later in this study (136 n.).

and *A Portrait*, Pound states that he is tired of rewriting arguments for the realist novel and quotes the entire preface to the first edition of the de Goncourts' *Germinie Lacerteux*, which was discussed above. In doing so, he reaffirms the position that the realist novel is akin to science and has a liberating, unifying effect on the whole of the human person and the social organism.

The publication of *Ulysses* in book form in February 1922 prompted Pound to focus all of his thoughts from the previous several years. In a pair of articles published in *The Dial* and the *Mercur de France* in June 1922, he finalized his thoughts on Joyce's completion of Flaubert's realism, constituting his fullest theoretical treatment of the novel and its place in modernity. He again quotes the Goncourts to justify the seriousness of the novel and connect it more explicitly to liberation, science, and social renewal. The June "Paris Letter" in *The Dial* is a somewhat rambling accolade, delineating the traditions from which Joyce derives—the schematizing of medieval scholasticism and the realism of Flaubert—and explaining why he is better than various other writers, such as Rabelais, Henry James, and Proust. Pound begins by taking the bold position—very similar to the one T. S. Eliot will take in his famous article "Ulysses, Order, and Myth" in the November 1923 number of the same magazine—that "all serious men of letters, whether they write out a critique or not, will certainly have to make one for their own use" (Read 194). In particular, he admires Joyce's efficiency in condensing so much of Western thought and literature into small portions of the novel, which "includes a whole history of English prose, by implication" (194). The value of such "totalizing" techniques seems to lie in their ability to consume and critique the entirety of civilization, which will soon be connected to the liberating effects of science.

Pound identifies the genre of *Ulysses* as performing a critique, upholding literary

influence as the truest form of criticism. “In this super-novel our author has poached on the epic....” (Read 197).

Telemachus, Circe, the rest of the Odyssean company, the noisy cave of Aeolus gradually place themselves in the mind of the reader, rapidly or less rapidly according as he is familiar or unfamiliar with Homer. These correspondences are part of Joyce’s mediaevalism and are chiefly his own affair, a scaffold, a means of construction, justified by the result, and justifiable by it only. The result is a triumph in form, in balance, a main schema, with continuous inweaving and arabesque. (Read 197)

T. S. Eliot will make a similar argument in the November 1923 number of *The Dial*, where he lauds the mythical method of Homeric correspondences with realistic prose as a brilliant synthesis of antiquity and modernity. For Pound, the “triumph” of this unified form represents a kind of social unity in which Joyce speaks “with a many-tongued and multiple language, of small boys, street preachers, of genteel and ungentle, of bowlers and undertakers, of Gertie McDowell and Mr Deasey” (Read 196). But the value of this synthetic, critical, epic “super-novel” is this: “to my mind the only criticism of any work of art that is of any permanent or even moderately durable value, comes from the creative writer or artist who does the next job; and *not*, not ever from the young gentlemen who make generalities about the creator” (Read 197, Pound’s emphasis). In that way, according to Pound, Laforgue’s *Salomé* is the best criticism of *Salammbô*, whereas Joyce and Henry James are the top critics of Flaubert. They change the tradition itself and bring it forward. The argument that the wholeness and form of a novel perform a social function as criticism is then connected to Pound’s indictment of the divisions in contemporary civilization.

The article finishes as a treatise on novelistic form for both the illumination of reality and liberation from the ills of modernity. Joyce’s treatment of colonial Ireland presents “[b]y extension... the whole occident under the domination of capital” (Read 198). As well, Pound

lauds Molly's uncensored meditations—"bow to psychoanalysis required at this point" (Read 198)—for their liberating honesty: "[t]he manners of the genteel society she inhabits have failed to get under her crust, she exists presumably in Patagonia as she exists in Jersey City or Camden" (Read 198). Such "uncensored" passages are what earned *Ulysses* the charge of obscenity that precipitated its ban in the U.S., but the irony, according to Pound, is that "every child has the opportunity to drink in the details of the Arbuckle case, or two hundred other equodorous affairs from the 270,000,000 copies of the 300,000 daily papers which enlighten us" (Read 198). Hence the novel's social benefit. The mythic method coupled with realism engenders a larger framework for the integrity of form while presenting a frank view of actual contemporary circumstances. And this leads him to quote the Goncourts yet again.

"Ought the people to remain under a literary edict? Are there classes unworthy, misfortunes too low, dramas too ill set, catastrophies, horrors too devoid of nobility? Now that the novel is augmented, now that it is the great literary form... the social inquest, for psychological research and analysis, demanding the studies and imposing on its creator the duties of science... seeking the facts... whether or no the novelist is to write with the accuracy, and thence with the freedom of the savant, the historian, the physician?" (Read 199)

Pound used this passage earlier, but this time it is re-translated to emphasize first, capitalism's oppression of literary freedom, second, the realistic novel's development into a robust literary form, and third, its consequent ability to liberate individuals and hence society by means of scientific illumination.

The question of artistic honesty and censorship connects also to the notion, begun earlier, that language is ineluctably bound with social well-being. Clarity of prose and realistic fiction, like science, are key in that juncture. In that regard, Pound sees *Ulysses* fulfilling the function of the realist novel in Nineteenth Century France:

Is any one, for the sake of two or three words which every small boy has seen written on the walls of a privy, going to wade through two hundred pages on consubstantiation or the

biographic bearing of Hamlet? And ought an epoch-making report on the state of the human mind in the Twentieth Century (first of the new era) be falsified by the omission of these half dozen words, or by a pretended ignorance of extremely simple acts. [sic] (Read 199)

And a few lines later:

A great literary masterwork is made for minds quite as serious as those engaged in the science of medicine. The anthropologist and sociologist have a right to equally accurate documents, to equally succinct reports and generalizations, which they seldom get, considering the complexity of the matter in hand, and the idiocy of current superstitions. (Read 199, Pound's emphasis)

This is one of the first expressions of the notion that literary endeavor is hierarchically on an equal footing with the investigations of science and medicine. Not only does the style and subject matter of the novel contribute to social liberation, but it does so in the same manner as science: "A Fabian milk report is of less use to a legislator than the knowledge contained in *L'Education Sentimentale*, or in *Bovary*" (Read 199). The mission of social renewal through honest language and realistic literature is summed up well in the essay's final call for a literary culture in America.

Of course it is too soon to know whether our present ruler takes an interest in these matters; we know only that the late pseudo-intellectual Wilson did not, and that the late bombastic Teddy did not, and Taft, McKinley, Cleveland, did not, and that, as far back as memory serves us no American president has ever uttered one solitary word implying the slightest interest in, or consciousness of, the need for an intellectual or literary vitality in America. A sense of style could have saved diplomats. The *mot juste* is of public utility. I can't help it. I am not offering this fact as a sop to aesthetes who want all authors to be fundamentally useless. We are governed by words, the laws are graven words, and literature is the sole means of keeping these words living and accurate. The specimen of fungus given in my February letter shows what happens to language when it gets into the hands of illiterate specialists.⁶ (Read 200)

The connection of language with social renewal and social unity is associated here with science, as evident in the last sentence, the implication being that a scientific outlook is critical for correct understanding and therefore correct language and governance.

The other June 1922 article, "James Joyce et Pécuchet," continued to develop Pound's conception of science and the novel. Written for the occasion of Flaubert's centenary, the

6 Read notes that Pounds letter, actually dated March 1922, "ridicules John Middleton Murry's 'Gustave Flaubert,' *The Dial*, December 1921, as a typical piece of British critical fatuity" (200n).

article is a critical appraisal of his realism as it was vital to the modernist movement, positioning Joyce as the primary inheritor of his methods.

Bouvard et Pécuchet continue la pensée et l'art flaubertien, mais ne continue pas cette tradition du roman ou du conte. On peut regarder «l'Encyclopédie en farce» qui porte en sous-titre: «Défaut de méthode dans les sciences», comme l'inauguration d'une forme nouvelle, une forme qui n'avait pas son précédent. Ni *Gargantua*, ni *Don Quijote*, ni le *Tristram Shandy* de Sterne n'en avaient donné l'archetype. (Read 201)

My translation: *Bouvard et Pécuchet* continues the Flaubertian thought and art but does not continue this tradition of the novel or story. We can regard this "Encyclopedia in farce" that carries the subtitle "failure of method in the sciences" as the inauguration of a new form, a form without precedent. Neither *Gargantua*, *Don Quijote*, nor Sterne's *Tristram Shandy* have given the archetype.

The question of genre here is critical for distinguishing the identity of Joyce's work. Flaubert's final novel blends realism with an encyclopedic scope that satirizes the Nineteenth Century broadly conceived. In particular, it focuses on weaknesses in the arts, sciences, and civics through two clerks who seek all-encompassing intellectual stimulation in the Norman countryside. It covers everything from aesthetics and chemistry to agriculture and urban planning. Thus *Bouvard et Pécuchet* is intended, like *Ulysses*, to be a record of what the average man would have had in his head at the time, exploring the epistemological themes that signs are often confused with realities and that human thought is often divorced from human experience. A focal point near the middle is the European revolutions of 1848, often known as "The Spring of Nations," whereupon the pair are run out of the area and return to their clerkships as before. In that way, *Bouvard et Pécuchet* blends criticism of all the intellectual arts with criticism of the contemporary social organism—the whole social organism. The result, as Pound notes, is a new form that does not have its precedent in the great encyclopedic-satirical novels of the past, which aim only at the highbrow. The importance of satire as a performance of criticism, coupled with encyclopedic generic traits, is that it puts a finishing "cap" on the entire past, on

both the literary tradition and the larger cultural history that is a burden on the present. Joyce's realism, like Flaubert's, is able to "cut through," uncensored, to the conditions of the present; his is also, like Flaubert's, able to critique the belief that the current state of the sciences works for the liberty of humanity. Joyce, however, is more successful at simultaneously framing them in a literary form that itself synthesizes and critiques the tradition. Thus the realist-satirical-epic "super-novel" is a finishing gesture in both content and form. Flaubert's emphasis on the failures of the sciences corroborates Pound's notion that correct understanding and a new social order (i.e. 1848, 1918) can be attained through the agency of realist literature.

Pound stresses the importance of *Bouvard et Pécuchet* by quoting the Goncourts again, this time evoking their emphasis on the need of realism to address all social strata, rather than just the lower ones as in Zola.

Le Réalisme n'a pas en effet l'unique mission de décrire ce qui est bas, ce qui est répugnant... Nous avons commencé, nous, par la canaille, parce que la femme et l'homme du peuple, plus rapprochés de la nature et de la sauvagerie, sont des créatures simples et peu compliquées, tandis que le Parisien et la Parisienne de la société, ces civilisés excessifs, dont l'originalité tranchée est faite toute de nuances, toute de demi-teintes, tout de ces riens insaisissables, pareils aux riens coquets et neutres avec lesquels se façonne le caractère d'une toilette distinguée de femme, demandent des années pour qu'on les perce, pour qu'on les sache, pour qu'on les *attrape*, et le romancier du plus grand génie, croyez-le bien, ne les devinera jamais, ces gens de salon, avec les *racontars* d'amis qui vont pour lui à la découverte dans le monde... (Read 202, Pound's emphases)

My translation: Realism does not in fact have the singular mission to describe what is low, what is repugnant ... We started, we, with the riffraff, because the woman and man of the people, closest to nature and to savagery, are creatures simple and uncomplicated, while the Parisien and Parisienne of society, so excessively civilized, in which clear-cut originality is made of all shades, all halftones, all of these elusive things, like the charming and neutral nothings with which to shape the character of an elegant female toilette, take years for us to penetrate, to bag, to *catch*, and the novelist of greatest genius, believe it well, will never solve them, these men of the salons, with the *gossip* of friends that passes for them as the discovery of the world ...

Pound goes on to explain that the work of Henry James and Marcel Proust furthers the Flaubertian method as called for in the Goncourts' prefaces, but that they are still too specialized: "Mais ces tableaux de la haute société sont une spécialisation, une arabesque,

charmante, intéressante, tant que vous voudrez, plutôt qu'un progrès radicale de méthode” (Read 203). [My translation: But these tableaux of high society are a specialization, an arabesque, charming, interesting, whatever you like, more than a radical progress in method.] *Ulysses*, on the other hand, presents a more complete synthesis of humanity and the social context:

Il s'exprime différemment dans les différentes parties de son livre (comme le permet même Aristote), mais ce n'est pas, comme le dit le distingué Larbaud, qu'il abandonne l'unité de style. Chaque personnage, non seulement parle à sa propre guise, mais il pense à sa propre guise, ce n'est pas plus abandonner l'unité de style que quand les divers personnages d'un roman dit de style uni parlent de manières diverses: on omet les guillemets, voilà tout. (Read 206)

My translation: He expresses himself differently in the different parts of his book (as Aristotle permitted): but that does not mean, as the distinguished Larbaud said, that he abandons the unity of style. Each character not only speaks in his own way, but he thinks in his own way, it is no more abandoning the unity of style than when the various characters in a novel said to be of unified style speak in various ways: it omits quotation marks, that is all.

Joyce's realistic style not only reproduces the speech and thought of various characters as they are, but his use of middle-class heroes allows for a much fuller and more unified presentation of the entire social milieu, middle, high, and low alike. According to Pound, only Joyce has so far achieved this, since James and Proust specialize in high society and Flaubert's realism is incomplete: “Bouvard et Pécuchet sont séparés du monde, dans une sorte d'eau dormante. Bloom, au contraire, s'agite dans un milieu beaucoup plus contagieux” (Read 206). [My translation: Bouvard and Pécuchet are separated from the world in a sort of stagnant water. Bloom, however, is agitated in an environment much more contagious.] Joyce achieves the realistic portrayal of the environment through the minds of the characters, forging a more unified and whole presentation of Twentieth Century thought and modernity. The novel thereby employs a form that unites the characters with their world, with *the* world.

Though Pound values Joyce's realism for its liberating hardness and clarity, the poet

also admires the classicism and medievalism that produce a liberating form.

Joyce emploie un échafaudage pris à Homère, et les restes d'une culture moyenâgeuse allégorique; peu importe, c'est une affaire de cuisine, qui ne restreint pas l'action, qui ne l'incommode pas, qui ne nuit pas à son réalisme, ni à la contemporanéité de son action. C'est un moyen de régler la forme. Le livre a plus forme que n'en ont les livres de Flaubert. (Read 206)

My translation: Joyce employs a scaffolding taken from Homer and the remains of an allegorical medieval culture: no importance, it's a matter of cooking that is not detrimental to his realism or to the contemporaneity of his action. It is a means to regulate the form. The book has more form than those of Flaubert.

Continuing his remarks from the June 1922 *Dial*, Pound explains here that Joyce's use of a classical and medieval paradigm to "scaffold" the contemporaneous realism of his novel forms his critique of Flaubert. Although the "failure" [*défaut*] of *Bouvard et Pécuche* is that "the incidents do not follow with a very urgent need" [*les incidents ne se suivent pas avec une nécessité assez impérieuse*], still, "the plan does not lack logic, but another would have sufficed" [*le plan ne manque pas de logique, mais un autre aurait suffi*] (Read 207). In other words, Flaubert's novel is too unformed and thus lacks energy. *Ulysses* on the other hand, though "always realist in the strictest Flaubertian sense" [*toujours réaliste dans le plus stricte sens flaubertien*] seeks with its realism "a generalization that stirs not only in number, in multiplicity, but in permanence" [*une généralisation qui agit non seulement sur le nombre, sur la multiplicité, mais dans la permanence*] (Read 207). Thus Joyce combines classicism, the Middle Ages, and Jewish antiquity in a "current action" [*action actuelle*], whereas Flaubert "separates the ages" [*échelonne les époques*] (Read 207). Joyce somehow combines realism with a classicist scaffolding in order to make the universal apparent in the quotidian. The poet's concern comes through here to provide the final ingredient for the serious modern novel: a signifying form that makes permanent and generalizable the everyday reality exposed through realist style.

After establishing Joyce's new blend of realism, Pound considers the novel in general as a genre vitally connected to social unity. The all-encompassing encyclopedia as a novel has only been directed against a whole century by Rabelais, Flaubert, and Joyce—and only Joyce has succeeded.

Cervantes ne parodiait qu'une seule folie littéraire, la folie chevaleresque. Seuls Rabelais et Flaubert attaquent tout un siècle, s'opposent à tout une encyclopédie imbécile,—sous la forme de fiction. On ne discute pas ici les Dictionnaires de Voltaire et de Bayle. Entrer dans la classe Rabelais-Flaubert n'est pas peu de chose. (Read 208)

My translation: Cervantes parodies but a sole literary madness, the chivalrous madness. Only Rabelais and Flaubert attack an entire century, opposing to everything an imbecilic encyclopedia,—in the form of fiction. We do not discuss here the Dictionaries of Voltaire and Bayle. It is not a small matter to enter the class of Rabelais-Flaubert.

The continued emphasis on wholeness makes itself felt here—the whole epoch needs to be taken apart and critiqued in order to form a new era, and this is effected through a new literary genre. However, since Rabelais addresses only the highbrow, and since Flaubert's encyclopedic novel is too lacking in form, Joyce's method alone succeeds in unifying the whole man and the whole epoch. However, that the realist novel has the power to reveal uncomfortable—even dangerous—truths deemed socially unacceptable or “obscene,” and to do so in a way that unifies the entirety of the present in an all-encompassing work, sparks strident public resistance. Pound cites the Irish protests against the dramas of Synge and the difficulties in publishing Joyce's fiction there as signs that the general public is not ready for true realism. As in earlier articles, Pound here associates the acceptance of clear, hard, honest prose with social wholeness and unity: “La démocratie (qu'il faut tant sauvegarder, selon notre feu calamité Wilson) n'a rien de commun avec la liberté personnelle, ni avec la déférence fraternelle de KOUNG-FU-TSEU” (Read 209). [My translation: Democracy (which must be safeguarded, according to our late calamity Wilson) has nothing in common with personal liberty, nor with

the fraternal deference of Koung-fu-Tseu.] Democracy, as practiced, is at odds with the human drive to express personal freedom, i.e. the liberty of the wholeness of the human person. As abundant evidence he translates Section 211 of the American penal code dealing with obscenity, which, according to Pound, would ban nearly all of the classics.

The friendship, as well as the correspondence, between Pound and Joyce began to trail off in 1924, when Pound's interest in Social Credit economics and sympathies with fascist politics made him find fault with *Work in Progress*. The hardness and clarity of *Ulysses* were not evident in Joyce's later work, as Pound wrote in a letter of November 15, 1926: "Nothing so far as I make out, nothing short of divine vision or a new cure for the clapp can possibly be worth all the circumambient peripherization" (*Letters III* 145). In later years, Pound's thoughts on writing and aesthetics remained quite the same, stemming from his initial involvement with Imagist poetics, as evinced in this excerpt from "Past History" of 1933.

As Madox Ford had been preaching the virtues of the French prose, of what he called impressionist prose, for some years, and as the Imagist FIRST manifesto had demanded "Direct treatment of the THING whether subjective or objective, and the use of NO WORD that did not contribute to the presentation," a few people recognized the significance of Joyce's first prose book at once.

This question of fundamental accuracy of statement is the ONE sole morality of writing, as distinct from the morality of ideas discussed *in* the writing.

Transpose this into science: an honest chemist tells you what is in his test tube whether it stinks or not. His honesty *as a chemist* consists in putting down the result of his analysis. An honest biologist isn't there to pronounce a favorable verdict on the patient regardless of what he finds by analysis.

A dishonest writer can do just as much harm as a physician who lies about an analysis and lets his patient behave as if that lie were the truth.

This perception of the writer's MORAL duty has been battle ground for nearly a century. Bigots do not like it, cowards do not like it. (Read 249, Pound's emphases)

The aesthetic and social import of the "fundamental accuracy of statement" is again, as in the earlier articles, connected with science. The association appears here in the usual two

dimensions of the liberating effects of factual statement and of enacting a civic responsibility (“MORAL duty”) that together would lead to correct thinking and therefore better governance. The emphasis on hardness and clarity that began in his early involvement with the Imagists can thus be traced through his subsequent championing of realistic prose during the war, his self-identification as a “phallic” poet (as opposed to Joyce, whom he termed “excremental”) during the 1920s, and continuing in the 1930s with an urgent focus on the present. The kinds of statements quoted here, however, bear the marks of exaggerated masculinity that characterized fascist culture, and will soon begin, likewise, to focus on the future.

As the title of the article suggests, Pound asserts in it that writers of the present must address economics, politics, and everything that is happening now, not what happened in the past. He quotes Wyndham Lewis on *Ulysses*—“‘Ungh!’ he grunted, ‘He [Joyce] don’t seem to have any very new point of view about anything’” (Read 251)—and then explains:

Ulysses is a summary of pre-war Europe, the blackness and mess and muddle of a “civilization” led by disguised forces and a bought press, the general sloppiness, the plight of the individual intelligence in that mess! Bloom very much *is* the mess. (Read 251)

Pound still considers the wholeness and unity of the novel, and *Ulysses* in particular (“a summary of pre-war Europe”), to provide insight into the conditions of its time. Clear, realist prose is still held to be the bedrock of a more perfect civilization, the possibility of which Pound saw in the new fascist societies of central Europe, especially Mussolini’s Italy.

Awareness to the present is indisputably part of a great writer’s equipment, it is a dimension to be measured, or a component in his specific gravity to be judged and computed, and if you ask me whether I believe that Joyce in 1933 is alive to the world as it is, a world in which technocracy has just knocked out all previous economic computations, and upset practically all calculations save those of C. H. Douglas; a world in which the network of french banks and international munition sellers is just beginning to be expressable on the printed page; in which class-war has been, or is as I write this, simply going out of date, along with the paddle-wheel steamer, and being replaced by a different lineup or conflict, I must answer that

Mr Joyce seems to me ignorant of, and very little concerned with these matters. Anthony Trollope wd. have been more alert to their bearing. (Read 251-252)

The hardening of creativity—"a dimension to be measured, or a component in his specific gravity to be judged and computed"—is an extension of his earlier evaluation of realist prose. Now, however, it is markedly spatialized, giving the scientific association an overtone more akin to physics. In line with that overtone, the focus on the present conditions of civilization is becoming more totalized, as in his monolithic vision of society where the "class war has been... simply going out of date." In that way, Pound came more and more to denigrate Joyce's latest work for not being "hard" enough. In a 1936 letter to Lewis about forming a new cenacle for preserving civilization, he expresses a quasi-fascist disregard for softness and flow: "this flow of conSquishousness Girtie/Jimmee stuff has about FLOWED long enuff" (Read 256; from a letter at Cornell). This is the kind of rhetoric that Joyce satirized in the lecture of Professor Jones in *Work in Progress*. Joyce's fable of the Mookse and the Gripes aims at Lewis for his attacks in several articles in *The Enemy* and *Time and Western Man*, which lump together Joyce, Einstein, and Henri Bergson as time and flow-based thinkers. However, the fable takes aim at Pound as well. As will be detailed later, the space-time debate between Joyce and Pound/Lewis stems directly from the discourse of popularized physics as it was carried out in avant-garde magazines, generalist periodicals, and radio broadcasts. The novel becomes, for Joyce, a literal unification of space and time that creates not only a new generic form but the basis of a new social order. Pound and Lewis stood for a "hard" or spatial (fascist) political/economic order, while Joyce preferred a more unified and humane one.

Pound's critical writings exemplify the state of discourse on the novel both before and after popularized physics enters the discussion. Taken together, there is a unified argument that

a “firm literature” (realism) is necessary to combat the ills of contemporary civilization, that the novel is the genre best suited to the task, and that the liberating qualities of its epistemology are akin to science broadly conceived. Thus, for Pound the novel is always associated with bringing about a new social order. Pound, the pre-war and wartime Imagist, saw it as an antidote to “rehashed Victoriana” that would bring about clear thinking, proper governance, and personal liberty. In later years, “hardness” becomes associated with the spatial, masculine dimension of fascist politics as it looks toward a bold new future, prompting him to form a reaction against “soft” or time-based aesthetics. Joyce was well aware of Pound’s critical writings.

However, while it is important to recognize the unity in Pound’s thought over these years, it is equally important to realize that the format in which it is published—the periodical—puts it in conversation with other critical and creative works. Neither Pound nor Joyce wrote in a vacuum. Both writers published in several periodicals over many years. It is therefore necessary to look beyond Pound to the broader discursive context in which Joyce formed his art. In that way, the context in which Pound wrote his thoughts on the novel similarly values encyclopedic scope and interdisciplinary method with a mission of social renewal. It is not difficult to see that *Ulysses* likewise grows out of this discursive context, since Joyce began work on it around the time he began reading *The Egoist*.

Science, Liberation, and the End of the Novel in *The Egoist*

Aside from newspapers, Joyce did not read many literary magazines until his work was placed in *The Egoist* by Ezra Pound during 1914. Once that relationship began, Joyce read every number

of *The Egoist* and, starting with the serialization of *Ulysses* in 1918, *The Little Review*. He also received isolated issues of other periodicals containing reviews of his own work plus that of his new correspondents T. S. Eliot and Wyndham Lewis. From that point onward, Joyce was in the life-long habit of checking newspapers and magazines, where he no doubt came in contact with their broad spectrum of topics. So, not only was Joyce intimately acquainted with Pound's writings quoted above, but he was familiar with the discursive context in which they were published. Therefore, a survey of how science and the novel are represented in *The Egoist* and *The Little Review*, with glances at some other periodicals he read, will give a clear picture of the material culture out of which *Ulysses* emerges.

The contents of Joyce's home libraries in Trieste (1905-1915, 1919), Zurich (1915-1919), and Paris (1920-1940) were constantly in shift. Pound sent Joyce many issues of *The Egoist* from 1914 and *The Little Review* from 1918 until he left Zurich during the Winter of 1919. Joyce wrote John Rodker from Paris on September 29, 1920, asking for all copies to date of *The Little Review* containing the serialized *Ulysses* (beginning March 1918), as his own copies were sent in a trunk from Trieste that had been lost (*Letters III* 23). In that letter he also asked whether any issues had come out since the May-June 1920 number. In a letter of November 10, 1920, Joyce asked Rodker for the number of September-October 1919 (*Letters III* 29). Upon leaving Paris in late 1940, Joyce possessed all numbers from at least March 1918 to September-December 1920, which constitute all the issues containing the serialized *Ulysses*, ending with episode 14 (Gheerbrant no. 260).⁷ At that time he also had the February 2, 1914 to September 1, 1915 numbers of *The Egoist*, which contained twenty-five installments of the

⁷ Gheerbrant is not paginated; its entries are numbered.

Portrait with several interruptions (Gheerbrant, no. 213). From his letters and the biographies, we know that Joyce also read the January 15, 1914⁸; March 1, 1916⁹; April 1916¹⁰; and March¹¹, April¹², May¹³, and June¹⁴ 1917 numbers of *The Egoist*. However, it is also evident that he received much of the rest of the run as it serialized *Ulysses* from January-February 1919 (about nine months after it began in *The Little Review*) until its closure in December 1919. Since the holdings of Joyce's abandoned Paris flat were incomplete at the time Gheerbrant made his catalog, and since the letters show that Joyce actively acquired and sent many later numbers of both these magazines, it is very likely that he possessed over time a complete run of *The Egoist*, most of *The Little Review* from early 1918 to the end of 1920, plus sporadic numbers from Winter and Autumn 1921.

The Egoist began on January 1, 1914, in London, as the newly reincarnated *New Freewoman*, a feminist magazine edited by Dora Marsden. Bearing the subtitle "An Individualist Review," *The Egoist* contained articles, reviews, poems, and serialized fiction espousing the liberty of the individual over what it deemed the oppressive influences of modern culture. Egoism thus conceived was an idea much in circulation at the time stemming from Nietzschean philosophy and the drive to reevaluate all values. In that way, the magazine had an encyclopedic scope matched with a polemical and iconoclastic tone. It took aim at all the arts, sciences, and social practices for the purpose of bringing about a new social order in which the individual had greater agency.

8 *Letters* II 395, *Letters* III 32, Ellmann 400.

9 *Letters* II 377.

10 *Letters* II 377.

11 Ellmann 414.

12 *Letters* I 102.

13 *Letters* I 103.

14 *Letters* I 103.

The paratexts give a strong sense of the attitudes and topics of interest to *The Egoist's* readership. Near the end of the very first number, a quarter-page ad for a new book by John Upward, *The Divine Mystery: A Reading in the History of Christianity down to the Time of Christ*, implies a reevaluation of science and religion.

The author's *New Word* is the only work on science and religion that has ever been accepted by both sides. In the present volume the history of religion is presented as the history of science. The story of the Virgin Mother, though only an episode in the narration, will be read with especial interest by reformers of the relation between the sexes. (20)

The interdisciplinary examination of two seemingly opposite sides, along with the finishing statement that the book would be of interest to feminists and reformers, shows an attitude that seeks to unify a wide array of material into a socially progressive work.

The same attitude is also visible in a juxtaposed, quarter-page ad for Max Stirner's *The Ego and His Own*. The ad quotes *The Morning Post*, which finds "something awe-inspiring in the spectacle of this lonely thinker applying himself to the hopeless task of destroying the myriad mansioned structure of human society with a small hammer that no suffragist would look at and a bent nail for chisel" (20). The ideal of the individualist artist, here applied to a social thinker, will be applied to the scientist—including Einstein—during the inter-war years. Later on the same blurb explains that "[t]o Stirner, the Ego is the only reality, the only ideal," and that only when all humankind can say with him that there is "nothing else in the universe" can freedom be fully achieved (20). Again, the magazine espouses the renewal of the whole social order—"the myriad mansioned structure of human society"—along the lines of an idealism of the individual. The same ad also features a blurb from *The Athenæum* claiming that the book's doctrine of "complete egoism" gives it permanent importance (20). Below the ad for Stirner's

book is one for *Anarchism*, by Dr. Paul Eltzbacher (which Joyce owned in Trieste¹⁵), a comparative study of the writings of Godwin, Proudhon, Stirner, Bakunin, Kropotkin, Tolstoi, and Tucker. According to a blurb from *Chicago Public*, the author's "scientific exposition is all the more valuable because he is not an Anarchist" (20). However, the anarchist translator (Steven Byington, a regular *Egoist* contributor) describes the book as "the most complete and accurate presentation of anarchism that ever has been given in so short a space" (20). Another book advertised on this page attempts to delineate the agreements and differences between state socialism and anarchism.

The attitudes and social positions of *The Egoist's* readership can be gleaned from this typical page of advertisements. The books are pitched toward a university-educated working- and middle-class audience interested in the larger questions of religion, science, and politics. Authoritative endorsements are culled from a mix of relatively high brow literary magazines such as the *Athenæum* and the French *Les Nouvelles Littéraires*, of conservative daily newspapers like *The Morning Post*, and of other avant-garde magazines like *The Little Review*, *Poetry*, and *The Future*. Throughout its run, *The Egoist* also contained ads for other avant-garde magazines such as *Blast* and *Playboy*. Thus, it clearly sought to gather and unify a broad range of ideological material, albeit for its own political ends. One important pattern running through the ads described above is the use of "science" as a legitimating reference point. Upward's book addresses science and religion in a way that is meant to advocate the social and sexual liberty of women. Eltzbacher's book is lauded as a "scientific exposition" of individualist anarchy. What the pattern suggests is that the readership viewed science as a legitimating force in the struggle to

¹⁵ According to Ellmann, the book appears in a bill from the bookseller F. H. Schimpff, indicating that Joyce bought it between October, 1913 and May 9, 1914, and that he paid close attention to *The Egoist's* content (779n). *The Egoist* of February 16, 1914 appears on the same bill (779n).

assert and bring about greater individual freedom and therefore a better society. Such an audience, socially and artistically progressive, is therefore generalist in its interests but specialized in taste and ideology.

In the primary content of *The Egoist*, pieces concerning science contribute to a long-term debate over free will vs. determinism, questioning whether civilization and the self are governed by the laws of the universe. For example, the very first article of the first issue, aptly titled “Liberty, Law, and Democracy” and probably written by Marsden, argues that law and liberty, often connected, actually devour the spirit of the people. One climactic point states that “we who are so near an age when the mere mention of ‘Universal Law’ would produce lyrical intoxication, ‘All’s love, All’s law,’ a very swoon of security, do not propose here to break in upon the belated obsequies of that dead or dying concept” (3). The scientific and religious overtones of Victorian “Universal Law,” invoked in an apparent quotation from Robert Browning’s poem “Saul,” are deemed here an enervating concept tied to the legal system, the very foundation of civilization. In the Views and Comments section, one reader’s letter criticizes Steven Byington and Henry George, who in earlier issues argued that capitalist interest “is not an arbitrary, but a natural thing:... the result... of laws of the universe which underlie Society” (5). The negative tone in which these works are quoted implies the magazine’s program of individual liberty over the social oppression of modernity. It also hints at a disillusionment with the “old science.”

A far more indicative article, also in the first issue, is “France To-Day: A Group of Thinkers,” by American journalist Edgar A. Mowrer. It reviews a book titled *Le Matérialisme Actuel* [*Present-Day Materialism*], from a series titled *Bibliothèque de philosophie scientifique* [*Library of*

scientific philosophy], published in Paris in December 1913. It is especially worth noting that the volume is edited by Ernest Flammarion, brother of the French astronomer and popularizer to be mentioned by Pound in the March 1, 1916 number of this magazine, and which was discussed above. The book contains essays from such thinkers as Henri Bergson (psychology), Henri Poincaré (mathematics/physics), Jean Friedel (biology), Charles Gide (economics), François de Witt-Guizot (literature), Gaston Riou (literature), and Firman Roz (literature), stemming from their presentations at a conference on the state of materialism and its philosophical basis in French science and art. The opening paragraph bears quotation in its entirety.

When a new star appears in the celestial firmament its brilliance arrives unheralded. Though the Lords of Light have spent upon its being a million years of preparation, though the universe has laboured to the end of flashing its starriness upon our eyes at the moment fixed, of these preparations, of this gigantic focus, we can have no prevision. But when human minds are straining the universal currents for particles of thought and are labouring agglomeratively to forge a master idea, all the flames of their forge-fires cannot be so hidden. Those whose vision is most ranging will have been attracted by a spark; will have perceived mistily the toiling figures and have recognized them even across great spaces of the mental universe. When the new sun appears it will thus have been not inaccurately foreseen. So it is now. For behold, there is a new star in the constellation France, and its clearest rays are passing everywhere in the form of a book. (6)

The astronomic rhetoric is no doubt designed to convey the book's importance and build interest in it. However, the immensity of the universe is used to describe the modernist project of wholeness in scope and unity of presentation, of "straining the universal currents for particles of thought and... labouring agglomeratively to forge a master idea." In the striving for wholeness, "those whose vision is most ranging will have been attracted by a spark [the book under review]" and recognized its authors "across great spaces of the mental universe." This passage uses the imagery of astronomy to convey the double sense of the all-encompassing intellectual (and international) scope of the movement and the implied scientific nature of

modernism's explorations (as the reviewer sees them).

The purpose of the article is to bolster the new international idealism of the individual by discarding the "old materialism." "Materialism" is never quite defined in this article, but it can be taken as the view that all phenomena, including human nature and the mind, are determined by matter and its motions. Mowrer asserts that France has become sickened by the undue influence of materialistic science over religious life, but that the new idealism is starting to unify the key areas of humanistic endeavor.

A bas la matérialisme is the cry. Though this resurgent longing be not confined to France, it is France that has suffered most from two generations of "scientists," of scoffers and of Zolas. "To-day France is mayhap the country of the world where preoccupation with the spiritual life is disturbing individual consciences most profoundly." Conflicting politics—monarchical reaction, nationalism, syndicalism, socialism—make of journalistic bulletins a chaos. The old science of Huxley, Renan, Edgar Quinet and Haeckel is an object of quiet mirth to lads of the Latin Quarter whose first beard is not yet dark upon their cheeks. Idealists and reformers have the floor. There are the aesthetic anarchists, who are working for the spiritual regeneration of their nation by means of Walt Whitman and Nietzsche, art expression and individualism. (6)

This passage, like the advertisements sampled above, also associates science with the political order—the "old science" of Huxley et al. with the varieties of socialism and aristocracy—implying a vague underpinning of all by universal law. The point being made is that those forms of science and government are somehow obsolete and oppressive, that they deny the freedom of the individual. Just what is the attitude toward science in general is not clear here, though it seems to see room for a less deterministic science in the culture of idealists and reformers. It is not difficult to see how Stephen Dedalus at the end of the *Portrait* fits in with the "lads of the Latin Quarter... who are working for the spiritual regeneration of their nation by means of Walt Whitman and Nietzsche, art expression and individualism."

The first essay of the volume discussed by Mowrer is "The Soul and The Body," by Henri Bergson. Bergson's article gives a new form to the psychological realism first presented in

Matter and Memory (1896). Mowrer describes Bergson's response to the materialist psychological assertion that if we had a table of all the correspondences between the cerebral and mental, we could know all that the "soul" thinks and feels.

This, replies Bergson, you can never prove. It does not fall under immediate observation. Though it be, as you say, opposed to the law of the conservation of energy that the mind be in any sense truly creative, this law, like all physical laws, is only the summing up of observations made upon physical phenomena. What you do is to assume that the laws which hold for the physical world apply equally well to the mental. But this is the point to be proved. As a matter of fact, from observations made upon the nervous system in general, one is driven "to the conclusion that the constant contrivance of consciousness... is to convert physical determinism to its own ends.... All that observation, experiment, and in consequence, science, permit us to affirm, is the existence of a certain *relation* between the brain and consciousness." (6; Mowrer's ellipses)

Mowrer's popularization of Bergson, explaining his thought to a less specialized audience, is clearly edited to apply the magazine's program of espousing individual liberty. That is not to say that Bergson did not espouse the same. However, what Mowrer highlights here is Bergson's *empirical* argument against psychological materialism, noting that it is not possible to observe all correspondences between events in the brain and in the mind. In that way, he makes a case against the materialist notion that the mind is completely determined by the laws of physics, in particular the law of the conservation of energy, which states that energy can be neither created nor destroyed. Showing substantial portions of the mind to reside outside the observable environment of physics allows Bergson to say that the mind *can* create out of nothing: that empirical evidence shows the nervous system continually converting "physical determinism" to its own ends, and that therefore the most we can say is that there is merely a relation between mind and brain. Mowrer might seem at first to be slightly antithetical to science generally. However, he is adopting Bergson's empirical, scientific argument here to conclude that (1) the human mind is not determined by the laws of physics and that (2) there

is less certainty in physics and psychology than the “old scientists” would have us believe.

The next paragraph asserts that the mind/brain dualism comes from metaphysicians, not scientists, and calls on scientists to admit it and not pass off their conclusions as the results of science. Mowrer then gives a telling assessment of Bergson’s statement that rhymes strongly with the modernist, novelistic examination of interiority.

From this point the distinguished philosopher expounds his own idea of the mental-physical relation following, in the main, his former development of the topic. By an examination of the psychology of language he arrives at the conclusion: “The brain is an *organe-de-pantomime*, and of pantomime alone. Its rôle is to mime the life of the mind, and to mime also the exterior situation to which the mind must adapt itself... (It) is the organ of attention to life.” (7; Mowrer’s ellipsis)

This could well be a paraphrase of the technique of *A Portrait*—which will begin its serialization in this magazine two issues later, on February 2, 1914—as well as *Ulysses*. The article goes on to admire the “vigour and fertility of [Bergson’s] most casual ideas,” which are “nothing short of marvelous,” and to say that his expression is also “a theory of style”. Hence, Mowrer explicitly associates this “new” scientific discourse with artistic creativity.

The next section deals with Henri Poincaré, perspective, and the cognitive activity of science in relation to the unknown. It states even more explicitly than the materials above that science evinces an unquantifiable aspect of the mind, which “proves” the naturalness of human liberty.

To the mathematical mind of the late Henri Poincaré (New Conceptions of Matter) there is no such thing as a problem of materialism. Or if there be, science can never utter the last word toward its solution. Science will always be by definition imperfect. Whoever says science, says duality between the mind that knows and the object known; and so long as this duality subsists, so long as mind distinguishes itself from its object, it can never know the latter perfectly because it will never see but the exterior. Intellect cannot transcend itself in order to conduct investigations upon its own person. Although each new scientific discovery is a success for determinism, there will always remain a region unknown. In this region will be found human liberty, and from this place of vantage the mind will direct all the rest. (7)

This repetition of the argument against determinism, backed by scientific authority, then

expands into a longer discussion of the physical sciences.

In its own way, however, physical science tends to divide itself into two more or less deterministic camps—that of the extreme atomists, whose definitive conclusions respond to the human need *to understand*, and that of the others, the continuum-ists, who cannot believe in a final division of units and who therefore respond to that other need of men, *to see*.

Between the two “ultimate reality” has been cuffed about, its atoms split into electrons, and finally denied altogether; since, according to some, atoms of matter are only holes in the ether. “As these holes cannot be displaced without deranging the ether which surrounds [sic] them, it takes an effort to displace them, and they appeared endowed with an inertia that belongs, in reality, to the ether.” Not only men but bricks and porcupines are so many bubbles.

Thus we go, tripping lightly among the latest conclusions of the physical sciences, juggling with Planck’s theory of the *quanta*, according to which, as William James suggested some years since, time and space are given only in jumps, and human history is a matter of drops and atoms.

Materialism? Ah, we settled that matter at the very beginning, messieurs. (7, Mowrer’s emphases)

What is striking in this passage, especially in regards to Joyce, is that the physical sciences are divided into two camps: the more deterministic “atomists” who respond to the human need to understand, and the less deterministic “continuum-ists,” who reject a quantum theory of time and space (and human history) in response to the human need to see. This kind of binary opposition continues into the inter-war years, when the periodical discourse reflects a division between “hard” and “soft” in art, science, and politics. Pound’s rejection of the flowing style, or “conSquishousness,” of *Work in Progress*, as discussed above, is one example of that. The division and subsequent union of the brothers Shaun (the upper, cerebral, rational half associated with hardness and space) and Shem (the lower, genital, and creative half associated with softness and time) would also reflect this way of thinking.

Also worth noting here is Mowrer’s awareness of contemporary physics, particularly of the way that theories of mechanics and matter involve the question of the ether. Since Mowrer seems to assume the presence of an ether, it is likely he was either not aware of Einstein’s special relativity theory (1905), which did away with the ether, or perhaps that he was aware

but rejected it. Either way, in this review essay there is a growing image of humanity as seen through the lens of physics, for “[n]ot only men but bricks and porcupines are so many bubbles.”

Mowrer’s next move is to discuss the essay by the biologist Jean Friedel, “Materialism and the Biological Sciences,” finding it to be philosophically near to Bergson.

Biology, he insists, cannot impose a particular outlook upon us, since it is always possible to explain a series of facts by at least two theories. Moreover, biology is both confined to the earth (unlike the physical sciences) and, to an overwhelming degree, to modern times.

But M. Friedel bases his faith in the ultimate spirituality of life, not on these slight points, but on the evidence of purpose, of which the fitness of all the beings in the botanico-zoological hierarchy of organisms offer evidence. “Life,” he says, “is both transformation and permanence: transformation in virtue of the flood of matter incessantly renewed in the body’s mould; permanence, in virtue of the mould itself, which develops according to its own law, conforming to a mysterious plan, even when the matter which realizes this plan is completely renewed.” Back of life lies the *élan vital*. Farther than this M. Friedel does not need (or cannot?) go.

His is the weakest essay in the volume under consideration. (7)

Élan vital (vital impetus or vital force) is Bergson’s term for the driving force behind evolution, which is related to his notion of consciousness and purpose. Friedel’s idea borrows from Bergson and is nearly the inverse of Darwin’s theory of evolution by natural selection, which attributes the development of more selectable traits to random mutation. In opposition to the determinism of Darwinian evolution, Friedel leaves room for will in nature as well as a “mysterious plan,” as opposed to “universal law.” The “mould” is described like an artistic or poetic pattern, connecting with the notion of literary naturalism as the biological observation of modernity, as in the novels of Zola. Mowrer leaves room for a kind of mysticism in the context of scientific knowledge production and the codification of phenomena, a characteristic similar to Pound’s exhortation for the increase of both imagination and realism in the novel.

The next segment deals with economics and morality, discussing Charles Gide’s essay “Materialism and Political Economy.” It is a vaguely anti-capitalist article: “If we have, as at

present, our profoundest faith in money, in the future we can have only a money-ridden commonwealth" (7). Gide's thesis is that desire is what generates value, even in a political economy. This leads him to claim that the transvaluation of values—the Nietzschean spiritualization of desire—"must come about chiefly through the work of the artist." (8). There is in the book, as well as Mowrer's review of it, an increasing emphasis on the role of the artist in making intellectual and social transformations.

The fifth segment is about François de Witt-Guizot, Gaston Riou, and Firman Roz, who trace the evolution of French letters. They discuss Zola, the De Goncourts, and naturalism at length, especially its pitfalls ("it was an age of sceptics") (8).

...when Renan was preaching futility eternal and an empty stoicism whose sole passion was to *know*—it was easy for Zola to defend his thesis, "to study man as he is—no longer the metaphysical man but the physiological man.... Thought is a product of the whole body." The error of Naturalism was that arbitrarily "it cut man in two and rejected half." Thus its products lack any touch of spirit--"no soul, no inner life, hence no truth," exclaims M. de Witt-Guizot. Sainte-Beuve remarked ironically that "truth is not entirely and necessarily on the side of evil, on the side of human folly and perversity." (8)

The emphasis here on vanity (emptiness) and incompleteness is striking. The statement that naturalism arbitrarily "cut man in two and rejected half" speaks to the manner in which early Twentieth Century intellectuals of an avant-garde bent felt restricted and dehumanized by the pervasive determinism in late Nineteenth Century thought and art. This concept recalls Bloom as a (mostly) whole man with Stephen (as sidekick?) as too specialized, or "half." In addition Shaun/Shem provide the two sides that must reunite. As indicated by the book advertisements discussed above, there is a need to reunify the self and society, as well as both with each other.

To do that seems to require a romantic notion of the individual, whose spirit and will are able to transcend the material order and create anew from it. I think it no accident that the essay ends with the literary writers, as (naturally) Mowrer sees the artist as leading this job of

reunification for wholeness. Also, three of the seven essays are about literature, and the final one (Gide) is moved up so that they form the culminating segment of the analysis.

The conclusion of this piece eerily predicts the advent of WWI and some of the cultural fallout that followed. It seems to espouse a reintegration of science and spiritual living.

To-day the unhealthy vapours of materialism are dissolving fast. In consequence all France is perceiving with a sort of relieved horror just how near their nation has been running to the shoal of mental and material dissolution. Viewed in retrospect, the danger appears clear-cut. France has been stifling beneath the fog of its own emptiness. The spiritual air was void of oxygen. Having nothing fit to breathe, men inhaled what they found. This was the time of moral "decadence," when disease increased to a national menace and the theatrical bill-boards flamed with advertisements for plays "for people of sixteen years and over."

...

I feel that a movement wherein are enlisted the best minds of France, who represent a culture so deep as hers, cannot be the mere vagabondage of a shooting star. It must be a more durable fire. There has been too much talk of the downfall of French prestige, of inherent Gallic viciousness and imminent decay. The French are not a nation of natural sceptics; they are among the most religious of peoples. Though for a time deprived of their faith by scientific progress, which made upon their more sensitive intellects a more conjuring impression, they are gradually returning to a sturdy idealism. Among young France to-day the most admired attitude toward life is one to which their ancestors first gave a name—*le bel sérieux*. (8)

Note that this essay discusses the cultural and national position of science in France. It stresses the reunification of human spirit, both individual and national/social, the split of which is blamed on scientific materialism. The celestial metaphor with which the piece opens and closes seems to couch it in a comparison to the disintegration and reintegration of civilization, too. This modernist passage is very much a finalizing gesture, seeing the materialism of the Nineteenth Century as an in-between stage that affected the "more sensitive intellects" of the French, who are now "returning to a sturdy idealism." Compare this situation to the materialism, vanity, and spiritual paralysis portrayed in *Dubliners*. This book review emphasizes wholeness as an interdisciplinary approach to re-establishing a more unified self via a less deterministic (less materialistic) science.

The next three numbers of *The Egoist*, which Joyce possessed, ran several articles associating social renewal with the novel. These pieces, like Mowrer's review, pit the liberty of the individual against the material determinism of the prevalent culture. In particular, the essays by Dora Marsden and Huntly Carter, who often wrote about science and philosophy, form long-running discourses on egoism and social renewal that began when the magazine was still called *The New Freewoman* and continued for the entire tenure of *The Egoist*.

In the issue of January 15, 1914, Carter's essay "The Public Ownership of the Artist" espouses a program of social renewal through the reunification of the individual, to be spearheaded by artists. He equates the self with the "Soul" and with Art—as did many avant-garde writers of the time. Carter reviles the "one or two shallow and unworkable schemes of reconstruction now being ventilated in the sixpenny press" because they do not address the needs of civilization as a whole, but only the material needs to the exclusion of the spiritual and artistic (33). In that context, the artist, a being closer to the purity of the "Spirit," has become enervated by the undue influence of the non-artist, who is closer to the impurity of the "Material." Since Carter believes that "Matter is Spirit devitalized" and that "Sensation is Spirit," modern materialistic man is analogous to the present state of civilization and therefore incomplete: "Intellectual man is a low order of sensational creature, therefore remote from Spirit" (33). This notion of common humanity as being too intellectual and incomplete echoes Pound's criticism of Joyce's *Exiles*, where he says in a letter of 6-12 September, 1915, "[t]here is no union in intellect, when we think we diverge, we explore, we go away. / When we feel we unite" (Read 46). Carter's imaginary interlocutor then asks the following.

"How on earth do you propose to set the Artist doing the good work of revitalisation when he is devitalised by a social system of which he is a part and which has reduced him to slavery?"

Have you not seen that he is that part of the vast social machine which society has constructed to do the opening of windows on material things for those whose vision has wasted and hands have lost skill and force? Has it not occurred to you that this vast system of machinery was actually so constructed as to compel the artist to move in a mass, to lose his identity and free-will? Are you not aware that the Artist may not deliberately choose what shall come into his mind, nor say what his subject shall eventually turn into, and that he chooses according to a market which is strictly ruled by the public? Don't you know that civilised society has been taking art out of the Artist's hands these many centuries, and has moulded him to manufacture the so-called Art-forms of the nation, and to endow it with colour and line to suit the whim of the moment? Has not civilisation closed the field of his own energies to the Artist? Is it not true that it can deal with him as it pleases, has made him its creature, its plastic material to which it can give any shape it likes? In a word has not civilisation deprived the Artist of all individuality? If then the Artist is a part of a machine constructed to act upon him, how in God's name is he going to act upon the machine? Tell me that." And I reply. "How do I propose to detach him from the machine and restore to him his own inner apparatus of motive power? How, in short, do I propose to re-individualise the Artist? I will tell you. But first I must tell you how the Artist became de-individualised. It involves my own story. (33-4)

The key in this passage is the statement that an autobiographical narrative is necessary for making an argument on how to re-individualize the artist. Carter's series turns into an account of his youth in England and Germany, the stages of his intellectual and creative development, and how his "I" was changed and finally formed against the cultural values and influences that define the age. In other words, his article series becomes akin to a serialized *Bildungsroman* and, like Marsden's essays and many other pieces in this magazine, asserts the primacy of the will over materialism. Granted, the article is not fiction, and therefore not a serialized novel, yet like the modern *Bildungsroman* it makes implicit arguments about the development of the whole self against "the machine" of modernity that simultaneously reject deterministic science and embrace realistic observation.

The issue of February 2, 1914, which contains the first installment of *A Portrait*, opens with an essay by Dora Marsden titled "Men, Machines and Progress." It takes aim at the Victorian practice of creating sacred names that remain uncriticized and lead to automatic or "mechanistic" thought—such as the moral benchmarks of "Duty," "Right," "Obedience," and "Liberty"—focusing in particular on "Progress." Marsden notes that progress is tacitly

assumed to be “an easing of the struggle with the external environment” and that “[t]he pioneers of science are the true forces of progress” (41). In developing new technologies such as steam power for the easing of labor, man has become desensitized to the environment and therefore a slave to his own tools. Thus, like Mowrer and Carter above, Marsden associates applied science with the materialism and determinism that have made civilization “synonymous with decay, a blight eating into the individual lives which make up the human kingdom” (42). However, and curiously, she sees more recent advances in the use of electricity in industry as a means of restoring the wholeness and unity of the laborer. Quoting an article about electrically refined steel in automobile manufacture from *Scientific American*, she surmises that “by the year 2000 a single unsupported individual will be able to produce almost without manual labor... the entire round of tasks necessary for the complete service of his needs” (43). It is worth emphasizing here that Marsden’s hope that advances in electrical technology will restore wholeness and unity to human labor derive from a popular science text. Thus, for Marsden, the evil is not science itself but the manner in which it is employed, for “[a]ll thinkers of any value have risen superior to the environmental conditions accidental to their age” (42).

It is for that reason that she castigates Thomas Alva Edison for his anti-individualist labor beliefs but praises James Watt for his insight beyond the possibilities of his time.

To base a way of living on the assumption that a type of machine is permanent and that men will submit their variable ways permanently to it, is to be dazzled and therefore deluded by a single chance discovery of a facile way of handling the vast inanimate power stored up in the world. It is sure that there must be billions of possible alternatives to this present way of handling, but that the sensitive observation of a Watt happened to concentrate, probably if the truth were known on account of a habit of mooching over the fire, upon this one, which suggested to him the possibility of steam-machinery. Had Watts [sic] had the type of mind which is hypnotised by its environment, deadened in its powers of observing new relations by a too strong “set” towards the accepted conventional way of regarding them, he could never have been impressed by a commonplace phenomenon in such a degree. But it is just this “set” type of intelligence which has seen finality in the system he established; who are persuaded that men must either adapt themselves to its ungainly services or present themselves at the door of the

lethal-chamber, unwilling but persuaded that they must die. (43-4)

There are several trends worth noting in this passage because they become more pronounced in the later discourse of popularized science. Here we have an early image of a scientist as a brilliant individualist and specialist, very much in line with the ideal artist in British avant-garde culture. Mowrer's review, above, approaches the same view in its exposition of scientists and other thinkers who employ empiricism to debunk a materialist notion of humanity. Also artist-like are Watt's "powers of observing new relations" in a "commonplace phenomenon." Since much of the avant-garde literature and thought involved a search for new relations among the elements of a work, of civilization, and of life, the ideal scientist finds the same in the natural world. This is an important precursor to the new relations that Einstein had already discovered and which will explode into literary circles after 1919. On Marsden's view, the new relations discovered by a scientist like Watt have the potential, like the activities of an avant-garde artist, to spark social renewal: "[t]here is nothing moreover in the past service of machines sufficient to induce men to set them up as the saviours of Society," for "[e]verything turns on courage and temper in the long run" (44).

Later in the same issue, the next installment of Carter's essay, here titled "Art-Passion, Patronage & Pay," expands the argument for re-individualizing the artist by providing an autobiographical account of his self-development. It is strikingly similar to the development of Stephen Dedalus in *A Portrait*, which begins its serialization in this issue. The juxtaposition of the two pieces forms a unity—perhaps editorially intended—exploring the possibilities of the *Bildungsroman* genre. Like Stephen Dedalus, Carter finds his vocation in early adolescence.

At twelve, then, I found myself at a fresh starting point of the extension of my individuality. My parents were dead and I had voluntarily cut myself off from all blood ties and

associations. I had set up experience as an ideal. I wanted the fullest experience of the new world in which my senses had cradled me. For my adventure the time was long and the way was rude. Young as I was I realised that the path I had chosen was lonely and flinty. I saw it would be serpentine, with perhaps a triumphal arch or two here and there and a sudden lift for my initiation into the mysteries. And so it has been—except for the triumphal arch. It seems that Civilisation has no triumphal arch for the man or woman who stands alone. To-day I am as lonely as ever, not from lack of sympathy but from the disillusionment inevitable upon keeping the eyes set inward. (58)

Also like Stephen, Carter rejects the ideals of Family, Nation, and Duty to find his own way in the teeming world of reality by forging his own impressions through experience. The notion of developing the whole self in unity with the physical world—by means of the senses—shows an impulse akin to the realistic novelist. As such, the following portions of the installment discuss his various experiences as they influenced his self-development.

Carter states that one of the first stages of his experience was when he began to realize his “universal life,” or to find out what the universe could tell him about himself and what he could tell about it (58). He documents a shift from feeling a universe that is intimate with him to one that is indifferent: “One day the feeling of ‘I’ arose, and from that moment I began to face the universe with the questions, WHO AM I? and WHY?” (58). This scientifically oriented humanism engendered an overly intellectual pursuit of understanding that brought his mind “into relation with activities that are limited to those of mechanism—the practical activities of the will and understanding” (58).

But the identity of the “I” puzzled me. It tortured me. I struggled with the problem for years. Sometimes I varied my position and came to intellectual ground. Then the struggle was hopeless. *I merely realised that the intellect had mistaken its profession. Being evolved by matter to deal with matter how could it possible explain the infinite?* It was when I threw the servile intellect overboard and said, “I must make what I can by My-self” that a sense of the desired identity came to me. (58, Carter’s emphasis)

This passage shows Carter to have a scientific understanding of the intellect as an outgrowth of material evolution. Like his diagnosis of civilization above, intellect, with its roots in the

material, is insufficient in itself for humanistic wholeness and unity. Thus creative activity and Art become here the forces for true unification, for whole development. The unification of inside with outside of self is reinforced through the notions of feeling and impression, resulting in a social renewal through rejection of the old Victorian values—"these fatalistic, democratic and socialistic labels" (58).

The unity of self with the universal is achieved through a process of sense impression similar to Joyce's epiphanies. Carter claims that "*the 'I' is the sum of impression*" and that impressions are the means by which the self enters contact with "spiritual reality" (58, Carter's emphasis).

All that mattered to me was that I did *feel* what was going on within and without me. And I did *feel* precisely that the "I" had gone forth at the bidding of some power to adventure in the great elemental, undying and continuous world of reality leaving its shell on the threshold of appearance. I did *feel* too that *the "I" had gone forth to the main stream of experience flowing from the source of reality to gather experiences belonging to its own self and having a relation and identity with its own self.* (58, Carter's emphases)

This type of phenomenology approaches novelistic realism in its use of subjectivity to unite inside with outside. But as for what to do with it, intellectual understanding is not enough:

The effort to think of its activities, to translate them into the language of science, ethics, philosophy or economics, gave me the sensation of groping blind and paralysed in darkness. I was only aware of receiving spiritual impressions and that such impressions were within me demanding to be released as my particular type of spiritual impressions. Moreover each impression demanded to be released as an activity and not to be transformed by curious mental processes associated with logic and memory into an impure and imperfect emptiness and passivity. In short these impressions awakened in me a creative sense and told me quite plainly that when my "I" went forth it went in search of aesthetic adventure, and therefore of this there can be no reasonable doubt:--*Art is the first movement in the world of spiritual reality, as it is the first movement that the conscious entity makes.* (58-9, Carter's emphasis)

This is just like Stephen Dedalus' epiphanies—which uncover the spiritual and metaphysical reality in everyday material occurrences, and which are employed in all of Joyce's work up through the *Wake*—and his mission to cultivate and express them. Hence, this autobiographical

treatise on the discovery of the artistic vocation as a means to a more whole and unified self is explicitly grounded in a powerful acceptance and connection with material reality. It is like science in that all its findings are to be grounded in experience (which is often synonymous with experiment). Hence the autobiographical *Bildungsroman* genre of the *Portrait* precedes Carter's treatise and forms part of the *Egoist's* discourse on wholeness and unity of self as it relates to the physical world. The physical world here emerges as one that is curiously apathetic towards humanity yet contains wonders and beauties that can be obtained by feeling it to the fullest possible extent.

Carter's article of May 15, 1914, "Towards a Human Æsthetic," makes some concluding remarks on the train of thought serialized hitherto. It expresses all of the tendencies of the *Egoist* avant-garde toward wholeness, unity, and social renewal, making a case for a more appropriate genre in book-form. His decision to bring the current train to a close seems motivated in part by the restrictions of the periodical genre: "it is not possible to deal adequately with the subject in the confined space offered to me for the purpose" (197). In addition to material limitations, "there is the difficulty which always accompanies an attempt to translate the experience of the cosmic sense into the language of self-consciousness," suggesting that the mode of expression itself needs further development (197). Since Carter's articles argue that art is a spiritual force essential to a healthy humanity—not just an adjunct—it is possible to read in these statements the implication that artistic writing is the appropriate medium through which to explore the frontier of the "cosmic sense," the reunification of the individual with the fundamental "flow" of the universe.

Obviously my best course is to seek an ampler form of expression. Perhaps I shall find it in book form. (197)

Already the blending of the serialized autobiography and essay genres is feeling its limitations and gravitating towards a book form incorporating a new kind—an artistic kind—of writing much more in line with the novel. Also, the flow-based aesthetics will become much more pronounced in the fiction published in this magazine and *The Little Review* near the end of the war and after.

In an article titled “Two Books” in the February 16, 1914 number, Richard Aldington looks at *Promenades Littéraires* by Remy de Gourmont and *Chance* by Joseph Conrad, and spends much time railing against the nineteenth century and its now “classic” authors that “must be read.” However, he does not seem to care much for modern novelists either. He says that *Chance* is like *Lord Jim* in that it is not a brain-thrilling yarn like *Typhoon* or *Youth*. Aldington admires Conrad’s play on chronology in narrative and compares him favorably to Laurence Sterne.

There was a time—it must have been anterior to Sterne—when a story-teller began—at the beginning, went on—through the middle, and ended—at the end. In *Chance* we have a short digression of some two hundred and eighteen pages before we return to the scene which terminates chapter one. The great Laurence (Sterne, not D. H.) could hardly have done better. The narrative slides from “I” to Marlow to Powell to the impersonal and back again, like a story of a scandal told by four impatient ladies. What matter? it is marvellously told, like—like all Mr. Conrad’s stories. (67)

Does he like Sterne for his strangeness, and dislike D.H. Lawrence for his conventionality? He goes on to say he will probably become a remembered writer, and that he has

produced that rarest of all things, an individual style. Without the delicate convolutions of Mr. Henry James and the too fragile allusiveness of Lionel Johnson, his style has at once the subtlety which the one possesses and the vividness which the other lacks. “Tess of the d’Urbervilles” has appeared upon the cinematograph; for Mr. Conrad’s works the cinema could only be supererogatory; he is indeed the greatest “filmer” of modern literature; the Homer of the South Seas; the raconteur sans fin et sans reproche. (67)

While Aldington pushes for a break from traditional novel writing, it is significant that he uses an example from the past for the qualities it has in common with current avant-garde values.

Newness in the novel is seen to embody a dehabitualizing strangeness that emanates from its breaking up of time and space, which are more germane to the present state of humanity and civilization. Important to note this is valued in light of the future popularization of relativity.

Aldington's article is immediately followed by "The New Sculpture" by Ezra Pound, a kind of manifesto that advocates the expansion of realist fiction to include a more rounded representation of humanity. Pound recounts a discussion with T.E. Hulme about the notion that Humanism has taken refuge in the arts, asserting that the difference between old art and new art is one in kind and intention, not in degree (67). In that way, he admires the sculptors Henri Gaudier-Brzeska and Jacob Epstein for creating an art that shows strife (realism) but also perplexes the beholder with the unfamiliar, with what lies beyond the public taste. Hence Pound's claim that these sculptors, and by extension other artists who work similarly, are to be admired rather than explained (68). This leads to the kind of argument about realist fiction that was discussed at length above: "We are equally sick of the psycho-intellectual novel—the analytical method of pretending that all hateful things are interesting and worthy of being analysed and recorded" (68). His argument for a radical evolution of realism in sculpture is then tied together with what he views as a necessary parallel development in the novel.

Realism in literature has had its run. For thirty or more years we have had in deluge, the analyses of the fatty degeneration of life. A generation has been content to analyse. They were necessary. My generation is not the generation of the romanticists. We have heard all that the "realists" have to say. We do not believe in Eutopias, we accept all that the realist has said. We do not think his statement complete, for he has often dissected the dead and taken no count of forces. To the present condition of things we have nothing to say but "*merde*"; and this new wild sculpture says it. (68)

Pound is reiterating the argument (also used by naturalists) that "realism" was not realistic enough. Again, as I said above, Pound advocates that the new art should move forward with realism as a basis and fuse it with a new primitive spirit, a kind of union of opposites. This

kind of unified duality will mark Joyce's work in *Ulysses* and *Finnegans Wake*.

As part of the discourse in fiction on the unification of humanity with the physical universe, an installment of M. de V.-M.'s fictional piece "Memoirs of a Charming Person" in the April 15, 1914 number ties together various religious traditions with the Edenic theme and the cosmos.

Nature, he went on, gives us the means of resuming intercourse with these elemental things, through a process of purification. Adam, after his fall, became impure and gross, and could not unite any more with creatures made of subtle fire, air, water, and earth; but the Sages have discovered that certain simple ceremonies can re-establish the currents between ourselves and them, and make intercourse possible again. It is most difficult, he confided to me, in the case of Salamanders, as the solar element must be imprisoned by means of concave mirrors, in a glass globe; a solar powder is thus formed, which in time endows us, so to say, with an igneous nature and gives us powers of the fire people.

...

I then discovered that it was quite unnecessary for him to eat. The Sages, foremost among whom was the great Paracelsus, could do without food for twenty years if necessary, living on half a scruple of solar quintessence; and one need only make a preparation of earth, such as I have already described, to keep any ordinary man alive without food, by applying it to his navel, and renewing it when dr: Paracelsus is said to have lived six months under these conditions. (154)

This notion of a post-Fall disconnection of humanity from the animal world and the physical cosmos is an iteration of the modern theme of alienation. The humans and animals in these passages draw nourishment from their union with the physical elements in a utopian vision that espouses the kind of wholeness and unity advocated in this avant-garde community. It also bears several classical themes about the close integration of humanity with animal and physical forces, which would certainly have appealed to Joyce.

The June 1, 1914 issue contains an article titled "First Novels" by Baptiste von Helmholtz that laments the state of the novel, its marketing, and reception. The article focuses on the tendency of magazine publishers to bill the first work of a new writer as "the first emanation" of genius, when in fact the focus should be on the quality and originality of the

writing (215). This leads him to claim that most readers of taste have turned in their despair to French writers. The commentary is upon the periodical networks as much as on novelists.

Have we no good writers in England that we should be perpetually reminded of bad ones? Is English prose in the hopeless condition one might be led to suppose from any of the daily or weekly publications of this realm from the dry-rotted "Spectator" and the Giddy one-a-penny "Times" to the Goss-ridden "New Weekly"? (215)

Opposed to this connection of bad writers—Gosse, Saintsbury, Quiller-Couch—with bad periodicals, Helmholtz states that the best writers of today appear in *The Egoist*: "That is to say one finds Hudson, the author of the 'Purple Land,' and James, and F. M. Hueffer, and Conrad, and D. H. Lawrence and a 'chap named Tomlinson' and James Joyce who is now in these columns, and a Cunninghame-Graham" (215). There is a sense that not only specialist writers but specialist publications and their communities bear the responsibility for sparking the larger artistic and social revolution.

The July 1, 1914 number contains an article by Huntly Carter, "The New Driving Force," that espouses vitality and clarity in a manner similar to Ezra Pound at this time, likewise taking aim at Futurism for the deadening of vitality by science. Carter identifies electricity as the new object of focus for applied science that conceives it as "the great driving force behind phenomena" (258). The futurist artist, in celebrating this vein of the Present, does nothing but to

stand in an oscillating field of mechanical appliances and to abstract therefrom a queer mixture of intermittent electrical discharges. Such discharges are sufficiently intense to illuminate the vacuum tube called a City and to obliterate the infinite space wherein it is laid. The forms which the discharges assume develop to a certain point according to the scientific abstracting apparatus employed by the interpreter, then remain motionless within the bounds of the debased Present. Now the interpreter will tell us that all this bemiring is the real thing and the true way of apprehending the Universal. But the truth is he is nowhere near the Universal. He is shut off from it by devitalised dynamism. He is simply endeavouring to make machines into Soul just as the past Age endeavoured to make Soul into machines. (258)

The notion of the modern city as an empty tube is more pessimistic than most

contemporary city poems, which tend to range from ambivalent to celebratory. John Gould Fletcher's series of city poems in this issue (pp. 275-276) reflect an ambivalence toward urban modernity similar to T. S. Eliot's preludes. As well, Richard Aldington's "Synthetic Sonnets" in the February 1st, 1915 issue parodies the pro-urban movement in the section titled "Cosmic": "When I behold Chicago I behold the universe— / The Stars, the Stars, the Stars!" (23). The city as universe is a theme that Joyce was taking up in the early stage of *Ulysses* at that time. However, in Carter's essay there remains the concern that art should attain the Universal, and the article finishes with a brief discussion of painting, poetry, and drama. Carter praises the works of Clarence E. King, Wassily Kandinsky, and Ford Madox Hueffer, citing a review by Harold Munro discussing poets "who are 'enlarging the scope of English poetic language' and of the *Imagistes* who are 'narrowing it'" ("New Driving" 258). This is of special interest "at a moment when the elimination of words from the drama in order to a restoration of the symbolism and mystery" that is a problem playwrights find it necessary to resolve. In other words, Carter implies that the honing of language (verbal and visual) is related to science and is one element—though not the only one—of a program for adjusting poetics in order that the Universal may be attained through the vitality of the artwork, which is "filled" with emotion and spirit, rather than "emptied" by science and intellect.

The next issue of July 15, 1914, continues this thread with Muriel Ciolkowska's "Passing Paris" column about French inventor and poet Guy-Charles Cros. She begins by stressing both the importance and danger of realism.

To escape realism and attain art it is necessary to have steeped in reality (I believe it is given to a few). The finite opens out the infinite,—truth is fond of hiding under word-play. (268)

Again, similar to Pound's arguments at this time, excessive language is considered to have a

distancing effect upon truth, implying that realism is akin to science, but that in order for realism to become art it needs “to have steeped in reality.” The perception and understanding of reality is implied as the domain of genius, of specialized aptitude and talent. Ciolkowska introduces Cros, then, by way of his scientific and artistic aptitudes.

He who transcends reality is he who has the keenest perception of it. The more intimate our contact with life the more distant our flights beyond may be.... We obtain views as vast by looking inwards. It is not the object seen which reveals, but the eye which sees. (268)

She goes on to celebrate his learning of Eastern languages, his invention of the phonograph before Edison, his stint as a professor of Chemistry, his stint in medical school and his practicing as a physician without troubling to finish a degree, and his mystical side that “found a means for interplanetary correspondence” (269). This biographical sketch shows a career similar to that of Joyce, though Joyce's scientific aptitude was considerably less than Carter's. Like Carter, Ciolkowska sees art and science as sides of the same endeavor, to attain reality, which is the Universal. Science does not have a monopoly on reality or truth.

Ciolkowska's thoughts on realism and science are extended to the novel in another article later in the same issue about the French novelist Lucie Delarue-Mardrus.

Lucie Delarue-Mardrus is the greatest French realist since Rousseau and Flaubert. For there is much to be done with plain, vigorous reality, but few can do it. Most realists have tried to render life by enumeration of facts and details—this is life catalogued, pinned, stuffed, and sterilised like specimens in museums. They used the mind's eye to see life, thus reality escaped them, for Nature is not approached with the reason, but with the senses and intuition. Therefore, one might suppose, did not numerous exceptions contradict the theory, that the novel—which is another word for realism—was particularly woman's sphere. Man would seem to be a too intellectual animal for this form of literature, had we not Thomas Hardy, the Russians, and so many women more gifted for the science, than the romance, of life! Notwithstanding these reservations the first novel was written by a woman—for Mme de Lafayette preceded Richardson by half a century—and so, no doubt, will be the last. (276-277)

The rest of the article is primarily summary, description, and quotation from representative works of Delarue-Mardrus, and therefore of less interest than the theoretical

statements above. Like Pound, Ciolkowska again associates realism, the novel, and science, and again asserts that the best kind has a vitality that makes it a true study of life, rather than an empty observation. The notion that it is not the object but the seeing eye that transcends reality and unveils truth is also continued here from the “Passing Paris” column earlier in the issue. She also contributes to a consensus among *Egoist* contributors that Flaubert has so far been the best realist and, therefore, the best novelist. Though Ciolkowska makes no reference to Joyce, it is possible to read her thoughts, as well as Carter's, in concert with the serialized segments of *A Portrait* that portray the social and psychological realism of Dublin and the superseding vitality of Stephen. It is no accident that Nietzsche underwrites both Joyce's work and the philosophical orientation of this magazine. Finally, the question of the novel's status—is it still a “woman's genre,” is it “scientific” or “romantic”—is the beginning of what becomes a more sustained question throughout 1916 and 1917, of what the “new novel” should be.

In the August 2, 1915 issue, Richard Aldington's review of *La Route d'Emeraude*, by Eugene Demolder, makes several theoretical statements about the novel as focus upon its generic identity begins to increase. Like much of the discourse about the novel seen already, Aldington praises the vitality and liveliness of Flaubert, claiming that Demolder continues that tradition by means of a sensual realism.

It is a novel of great sensual beauty, where words are so handled that they present to our senses the appearance, the smell, the taste, the sound, the very touch of life. We perceive the fields, the canals, the skies, the cities of Holland as clearly as if we had lived among them; we realize the life and the art of the country as if we had grown up in their midst. M. Demolder does not fall into the error of the Naturalists which consists in seeing everything in terms of the unpleasant; nor of the Romantics, whose error is to see everything in terms of the pleasant (these we have always with us); nor of the Symbolistes, who see everything in terms of something else: he is imagist—if I may use the word—because he presents the phenomena of life with precision, showing the beauty of beauty, the sensuality of the sensual, the ugliness of the ugly. (124-125)

Echoing Pound's calls for a movement beyond realism and naturalism, Aldington refers to

various sections of this novel as “poems” that are “presented in a clear precise manner so that you live and not only read the book” (125). The emphasis on the poetics of the novelistic narrative and its ability to evoke the Universal (“the beauty of beauty, the sensuality of the sensual”) creates a discourse with the *Portrait*, which is still being serialized in this number. It also fulfills a function similar to that of science as laid out in earlier contributions to the magazine discussed above. The narrow, precise language of poetic imagism thereby becomes part of the theory of the new novel in this magazine as well as in the pieces Pound was writing in various other periodicals, and is something that Joyce will continue in *Ulysses*.

Muriel Ciolkowska's “French Word in Modern Prose” column in the issue of January 1, 1916, picks up this question of generic proliferation in a review of two novels by the two authors collectively known as J.-H. Rosny.

The Rosnys have written “contemporary novels,” “idylls of primitive times,” have described “Etruscan” and “lacustral” amours, have given pictures of “London life,” “Paris life,” “theatrical life,” “literary life.” They have written the usual novel about the French Revolution, they have even written the biography of a cyclist; they have sought information and entertainment among anarchists and collectivists; they have looked back and have anticipated; they have translated from English, Spanish, Egyptian, and Korean; they have contributed to all the periodicals and they remain great writers notwithstanding....

Their evolution finds a parallel in that of Mr. H. G. Wells, realistic fiction, earning the qualification “sociological” and “psychological,” having succeeded to imaginative romance of the semi-scientific order. (7)

The catalog of novelistic genres gives way to a discussion of whether critics who have read philosophies in *Sous le Fardeau* and *l'Impérieuse Bonté* have done so correctly. Rosny states in the introduction to the latter that “altruism is a force wherein the highest intelligence and the most obdurate will may as fruitfully develop as in science or art” (7). Rather than a philosophical undergirding, the novels speak to “that rare and fine substance which shall form the humanity of the future” (7). Ciolkowska claims that their disjointed form heightens their realism, as they

follow life more closely, a claim that has been made about the novel since its beginnings.

The final passage makes a theoretical statement about the “new novel” and the current state of literature.

These quotations should suffice to disperse any misunderstanding as to the nature of the Rosnys' realism. It is not Zola's, or the Goncourts', or M. Octave Mirbeau's. Some reviewers have styled it “analytic,” but this term does not seem satisfactory. Perhaps Mme. Rachilde came nearest the mark when she called their novels “human” (in English one might say *humane*), in preference to their own qualification of “social,” while carrying a non-conclusive philosophy, “the wisest of all” as she adds (though it is not clear how a theory can be at the same time non-conclusive and philosophic). It would be preferable not to attempt any special qualification of books coming within the category of good: that is, literature, pure and simple. Whatever other purpose they may conceal or achieve is secondary provided the claim to literature be satisfied.

The Rosnys' books form a living, mobile literature, rich, sensitive, animating, a literature of facts with their repercussion upon the mind and senses (but chiefly upon the mind), a tragic realism by the side of which the boldest writings of modern English authors are timid—a literature of observation and of consideration, whose outstanding merits consist in extreme pity and extreme earnestness, entirely deprived of both irony and cynicism, an apostolic literature and not less literary because apostolic than are, for instance—all things being equal—the Scriptures, whose mission does not detract from them as art. (8)

This segment almost seems as if it could have been written by Pound, with its emphasis on moving away from generic labels if the piece of writing is good enough to claim literary status. The basis in facts, the strength of emotion, the carrying of a philosophy or understanding of the universal are congealing as a program for literature within this magazine, forming the context for a work like *Ulysses*, which does all of these things.

In the “Views and Comments” column of March 1, 1916, Harriet Shaw Weaver addresses the difficulties of printing Joyce's *A Portrait of the Artist as a Young Man* as an intact novel as the endpoint of a discussion of social wholeness and unity. The article addresses literary production and reception in terms of a cultural low, middle, and high, with the criticism that the high is often equated mistakenly with the popular and the best. Like Ciolkowska, Pound, and other contributors, Weaver points out that the new novel and the new literature should combine the low, middle, and high as part of a program of aesthetic and social renewal.

Had *Measure for Measure*, for instance, been a production of the twentieth century, could one name a printer and publisher who would willingly print and publish it to-day? If anyone believes that such could be found, we would refer them to the case of Mr. James Joyce's novel, *A Portrait of the Artist as a Young Man*, which ran as a serial through THE EGOIST, and which (not because we desire to saddle ourselves with fresh responsibilities in this difficult time, but in order to save a work of exceedingly high merit from oblivion) we propose to publish ourselves. During its appearance in our pages the notice of publishers was drawn to its value quite voluntarily by a very well-known (and very successful!) writer, and had Mr. Joyce consented to bow to the taste of the publishers' "readers," and alter or delete certain words and phrases and re-write certain sections in order to bring his work a little nearer the popular level, it would have been published "through the trade." But Mr. Joyce refused to comply with these requirements, with the result that no publisher would touch the book. Accordingly we decided to publish it ourselves. Even so the same difficulties cropped up again, and the printer declined to print except subject to certain excisions. Happily, a printer has now been found who is willing to print without deletions, and it is to be hoped that Mr. Joyce's work will at last, and without meeting with further difficulties, see the light of publication in the shape which he conceived it to take. If so, he will have to be congratulated not only upon his tenacity and courage in holding to what he knows his own work should be, but also on having won for the critical understanding intellect standing-room on a portion of the territory now held specially sacred to exhibitions of a vapid sentimentality trapped out with a furtive salaciousness. (35)

This passage highlights the great extent to which the politics of production—i.e. flouting censorship—were essential in the dissemination of early modernism. Wholeness and unity here mean not only the physical integrity of the work, that is, being published in its intended generic format, but to the honest and complete portrayal of its subject matter that characterized the novel genre.

Implicit in Weaver's argument is the notion that realism, the essential style of the novel, if it is to be successful, must be frank in its presentation of everything relevant to its subject or else the readership's critical and aesthetic faculties will atrophy to the detriment of civilization. This argument is taken up explicitly on the next page with the beginning of Pound's article "Meditatio," discussed at length above, which ties the realistic properties of the novel to science, clear thought, the salvation of civilization, and liberation.

A similar argument begins the next issue, May 1, 1916, where Richard Aldington praises Sologub's novel *The Little Demon* for showing the wholeness of humanity—especially its

evil—countering mainstream critics' protests that this novel is too unpleasant.

You say that “The Little Demon” is an unpleasant book? Look about you, look carefully about you at what is happening—is life so very much more pleasant, is it so much less petty? If Sologub is wrong in showing us the petty evil of Skodorozh, then Flaubert was wrong to show us the evil of the little towns round Rouen, and Germinie Lacerteux and how many more great books of France and Russia and England are poisonous libels on the human race. (“The Little Demon” 66)

In applying to mainstream print culture the “poisonous libel” description of wartime censorship, Aldington agrees with Pound, Ciolkowska, Weaver, Carter, and other contributors that Flaubert and the de Goncourts are the most whole and realistic novelists to date. Given Pound's arguments for the scientific authenticity of novelistic realism in the previous issue and in other periodicals at this time, the argument reiterates the notion that the scientific outlook, however meant, as the underlying answer to liberating literary creations.

Ciolkowska's articles through the end of 1916 begin to focus more upon novel form in addition to prose style, often making more overt connections with the war and the contemporary humanistic crisis. Her “French Word in Modern Prose” column of July 1, 1916, begins a treatment of Marcel Proust's *À la recherche du temps perdu* by discussing how both French and English “authors appear to be returning to works of long staying-power” (103). She continues:

None of the books it has been my pleasure to include under this heading as typical of the younger spirit in contemporary French literature follow the slender lines of structure common to the majority of modern productions, while the work I propose interviewing to-day ranks by its volume with the most monumental of works of fiction or of autobiography (for this book comes under the double description) of the less hurried and robuster past. (103)

What is notable in this passage is a return to value older, longer, all-encompassing works, as opposed to the more streamlined proportions that characterized modern novels just before the war. This seems to be an early expression of valuing the past and its reintegration with the present that characterizes modernist writing during the inter-war period.

After providing the reader with several passages from Proust, Ciolkowska goes on to appreciate the style and psychological penetration of the *Recherche*, expressing great value in its individuality and wholeness.

It is a very disheartening task this of reviewing books, for the fragmentary treatment disperses and destroys instead of conveying that individual, indivisible aspect of a work which distinguishes and isolates it in the world of books as the ensemble, and not the parts, of an individual give him his unique and separate character in the world of humanity, making of him a world within a world, a synthetical humanity. (105)

The comparison between a whole, individual art work and a whole, individual person is striking in light of the passage above about monumental novels. It continues the discourse about the need for comprehensive and uncensored portrayal of humanity, affirming the need for complete individuality.

Her article the following month, on V. Ricciotto Canudo's utopian novel *La Ville sans Chef* (1910), evinces many of the same concerns. In Canudo's novel, a cataclysmic event destroys much of a city, after which its inhabitants create a new kind of society based on the ideals of a few of its thinkers before the event. This theme of the book was probably of interest at this time due to the war. Ciolkowska associates the renewal of an idealist society with the novel genre (as that for representing a society) and later associates the celestial bodies with the whole of the human world and the novel (118). Interestingly, she indicates that the verisimilitude (or realism) resides in the perceptions of a mystical character, not a doctrinaire demagogue (118). She also values the novel's basis on theory but disapproves of the lack of form and style. So Ciolkowska is looking for the novel in some way to embody or represent in form the idea or structure of the ideas and possibilities it puts forth.

In the November 1916 issue, John Gould Fletcher returns to the work of the Russian novelist Sologub in "Sologub's 'Created Legend,'" to continue the discourse on the new novel

as the representation of a social-theoretical system. This article addresses the historical changes within Russia from the Russo-Japanese War to the Great War, stating that Sologub has created a new type of novel to represent and analogize, through form, the transition of its national soul. The discussion begins with a statement on the French novel, as praised highly by Muriel Ciolkowska, versus the Russian novel, focusing on form.

It has recently become the fashion to declare publicly that Russian literature, since Chekhov, has lost its vitality and become decadent. I recall a statement from a recent book of criticism:

“The French novelists used life to perfect their art—the Russian novelists used art to liberate their passion for life. That at this moment in Russia the novel has lost that zest, that the work of Kuprin, Artzibashev, Sologub, Merezhkovsky, Andreyev, shows exhaustion and sterility, means nothing; the stream will soon clear again.”

Now there are several objections to be made to this statement. In the first place, we do not class novelists such as Flaubert and De Maupassant as decadents simply because they respected form in their work. And if art must liberate a passion for life in order to be healthy, then Dickens was a greater novelist than Henry James, Fielding and Walter Scott are preferable to Conrad and Hardy. The function of criticism is not to set up these moral judgments, but to understand first of all what an artist has set out to do and then to ask oneself whether it is done ill or well. The difficulty that has hampered the influx and interchange of thought between English literature and any foreign literature has always been precisely that England persists in being twenty years behind the times. (167)

Couched within this exhortation for innovation in the modern English novel is a statement about the novel in general, which, as advocated by Weaver, Ciolkowska, Pound, and others above, should extend realism and fantasy to the whole of the social and psychological realms.

But along with the life of the new industrial communities has gone the old life, little altered. Russia is the land of survivals of the past. So Russia as she stood before the war was even more decentralized, more of a welter of confused tendencies behind which loomed the atavistic reactionism of the East. And it is this Russia that Kuprin, Artzibashev, Sologub, etc., have tried to depict.

Sologub alone, so far as I know, seems to me to have succeeded at this severe task of creating a new type of novel to display the transition that has been taking place in Russian life and in the Russian soul. And the reason that he has succeeded where others have failed again brings us face to face with another paradox of the Russian character. The Russians are not by temperament realists in the Western sense, in spite of the fact that the greatest Russian novels are all supreme documents of realism. The Russian mind sees not only the mud of the earth, but also the skies above it; and the fouler and nastier that mud becomes, the bluer and fairer and more unearthly must the skies be. (167-8)

The article goes on to treat the blend of realism and fantasy that Sologub attempts to achieve,

ultimately ending in a discussion of how the novel form can be used to unify the body/soul binary under the umbrella of a national spirit. This kind of criticism would certainly have appealed to Joyce, as he was attempting to do the same things during this time in the beginning stages of *Ulysses*.

In 1916 the reaction to the war within the pages of *The Egoist* was changing. There was growing pessimism and frustration with the uncertainty of how long the war was expected to last. Also, the war seems to have been viewed more as a humanistic crisis at this point, not just a political or economic one. The January 1917 issue increases the volume of this kind of discourse, refocusing criticism to address the responsibilities of the artist in light of the war. Ciolkowska's "Passing Paris" column, on Romain Rolland's being awarded the Nobel Prize for Literature for *Au-dessus de la Mêlée*, addresses contemporary arguments of nationalism vs. personal integrity and also touches on discourse about social renewal and salvation. She discusses how poetry and prose are received as genres, and how nationalism in literature can touch the universal (2). Similar to Ciolkoska's preference in 1916 for a return to older, longer styles in the novel, John Cournos' article "The Death of Futurism" criticizes the limitations and dangerous beliefs of that movement and calls for a return from abstraction to representation, as well as an end to the "masculomaniac" attitude of Futurism, Vorticism, and their brother movements (6). He also derides the "scientific and mechanical spirit of this twentieth-century war" (6).

Cournos also discusses Leonardo da Vinci as a superior realist due to his ability to see beyond mere representation or the mere scientific and mechanical tenor of his time to a more humanistic and universal vision. There is a great deal in this essay that associates art with

science, both directly and indirectly, as activities that “break into frontiers yesterday unknown” (7). The piece ends with a warning against reliance on a limited realism, in the manner of Pound, urging artists to keep an egoistic freedom so as not to get knuckled down into a limited academy with a new name. Another interesting piece in this issue is Huntly Carter's “Demot-Individualism,” a multidisciplinary essay about how the war has caused the breakdown of large social organizations into smaller ones based on more human connections and under a universalizing spirit. His detailed discussion of philosophy and economics makes the case simultaneously for a new order of art and civilization, one of the defining themes of modernism (9-10).

The February issue contains two very important pieces that raise the novel to the forefront of aesthetic and social change. The first piece is Pound's essay on Joyce's *Portrait*, “At Last the Novel Appears,” which examines the novel's form—wholeness and unity—in light of contemporary difficulties in getting non-traditional work published amid the hell of the war. This review is striking in its proximity to other essays on social renewal and aesthetics, as it makes an even more militant case for the renewal of the world order via the methods and practices of art (21-22). The second piece is Ciolkowska's “The Exiles,” a rare non-column contribution, which reviews a book about German soldiers interned in Switzerland¹⁶ that takes a theoretical turn about realism in art and the war. Like Pound, she makes the case here that realism and clear writing could have saved Europe from its current condition, and also states that realism is justified yet always somehow unsuccessful.

It seems impossible that this war should have spared a breath of life in what lingered here and there of realism in art: that realism to which all representation is legitimate but which ever falls short of reality.

16 Noëlle Roger, *Au Sortir des Camps allemandes; Soldats internés en Suisse*.

The significance of tragedy has already undergone a metamorphosis. The tragic situations of our modern romantic and naturalistic schools were drawn from sources some of which have immutable values, others of which are of relative and transient value. These are already on the shelf with a number of sentiments and sentimentalities we can afford to accommodate no longer. The circumstances of war cannot subtract from the pathos of *Dombey and Son* or *Tess* or *Jude*; it does not compete with Balzac. Not even Zola's divulgements are extinguished. Each continues in its peculiar sphere of drama. But the author to come finds himself faced by a world of unprecedented events which he cannot ignore if he persist in realistic evocations.

The trivialities, offered to the public as a derivative from the war, are indicative of a vague, subconscious awakening even among the vulgarest to the impossibility of measuring it with common sense. For no common sense can measure the war. (23)

What strikes me here is the notion that social reality and human reality are of a nature not able to be represented by realistic style, or at least, not by realism alone. The notion that common sense does not accurately and comprehensively deal with this world follows along that train of thought. I think we can see in this tendency the seeds of surrealism, as well as the manner of thinking that would ultimately be receptive toward the relativity theories when they are popularized amid the post-war confusion.

Interestingly, Ciolkowska, the perennial prose critic, identifies poets as having the greatest freedom in the current context, an inversion of the poet Pound's championing of the novel.

The poets alone have a free field before them. For they, having their own code, may, like Kabbalists, translate all themes. The prose-writers, the play-wrights, will be constrained to make a review of their stock of subjects, problems and plots. The real tragedies, borne in the souls (and bodies) of the majority, are too bleeding and sore; they are like some of those unhappy wounded who, bandaged all over, do not present a patch of immune flesh by which one dare touch them: only the minor tragedies will bear handling—therefore they won't deserve to be handled. A minor tragedy being no tragedy. Everything dwindles before the enormous facts defying comment and for which alone allegory has the necessary capaciousness. Probably a great upheaval, some violent transformation such as the one we are experiencing, provoked the *Odyssey* and *Illiad*. (23)

For the prose critic to recognize the universalizing abilities of prose and the necessity of an enormous literature to comprehend the crisis of contemporary Europe speaks to Joyce's foresight in designing *Ulysses* as a poetic-prose epic of modernity, growing up with and evolving

past the war.

This question of genre is later expanded to include the incompatibility of realism and imaginative art.

Subsequent to this war there will, or should be, no room for a hybrid form of art combining imagination and realism. Between purely creative art and faithful records of facts I can see no occasion for compromise. To the former category alone genius can make answer. In the latter the war will leave a vast bibliography which for sensation and emotions will eclipse all the novels and problem-plays any Wedekind or Shaw in the world can write. (23)

This seems to be the opposite of what Pound, Cournos, and Fletcher are saying about realism, about prose, and about the need for realism to hybridize with a more universalizing and capacious sensibility. The latter portion of Ciolkowska's essay quotes at length from the book under review, which gives a sense of the unreality and the subtle confusion when British soldiers are welcomed into Zürich for medical treatment. It describes how the German-Swiss population received soldiers silently for fear their language would unsettle the soldiers, prompting Ciolkowska to ask, "Who said things would fall back into their old places?" (23). About a new world order, she asks: "Have you ever been shown a photograph of a prisoners' camp, for instance, without minutely examining the tiniest detail from the expression on the men's faces to the time by the clock on the shelf? For what can be indifferent where a new world is concerned—a new species of men bred by new conditions, new sensations, new privations, new sufferings, new joys even?" (23).

In the number of April 1917, an article titled "The Death of the Machines" by John Gould Fletcher makes a Nietzschean offensive for the revaluation of all values as they pertain to art and the war. He states that the mechanization of thought, art, social forms, and the ad- and manifesto-driven schools of Futurism, Vorticism, Academicism, Cubism are taking over humanity. He also states that art must regain its emotional impulse and originality in order to

bring about human freedom. He has launched an offensive for aesthetic and social renewal. He says that the war has caused people to think and to take art more seriously, claiming that more people are going to theater and to hear music, are reading biography, history, criticism, and poetry (45). He also indicates, though, that they are not reading novels in the way that they used to. There are no data quoted to back this up, but what is significant is the perception that the novel is somehow a genre that has undergone significant change so that it can now be important to modern intellectuals. This seems to participate in the discourse of the last three years which implies that realism combined with emotional force in a novel could have a salvific impact. This is exactly the kind of novel that Joyce is working on as he receives these numbers of *The Egoist*.

This article is followed two pages later by a full page ad for *A Portrait of the Artist as a Young Man*. The extracts emphasize the precision and lucidity of its realism, and also comment on its presentation of the “real” environment in which young Irishmen grow up hating England. The extracts emphasize the realism and analysis of the external environment as well as the self.

In the next issue, May 1917, Muriel Ciolkowska reviews the autobiographical war novel *Le Feu* by Henri Barbusse. Her review provides an excited appraisal of the “truth first, literature second” nature of this novel, and ends praising its unlimited realism (“Le Feu” 55). It values the effect of shock and nausea wrought from the realism, describing several gory and horrific scenes. This seems to be a continuation of the kind of pre- and early-war discourse about realism and clear prose that we find in Pound, Weaver, and other contributors, which must be frank enough to awaken readers to reality. The end compares the novelist to a good soldier—someone who is honest—which seems like the same kind of praise accorded to scientists earlier in this

magazine, that as purveyors of ultimate and undisguised truth, they contribute to the liberation of humanity from the shackles of modernity.

Le Feu is an immense achievement. The author is as generous with his efforts as the soldier was unsparing in self-sacrifice. It is the work not merely of a literary man, but of an honest man. It is objective in its fidelity to facts, situations, character; it is subjective in its foundations. It has not the aspect of a professional production. M. Barbusse's previous work, *L'Enfer*, conveyed a similar impression on a less extensive scale. He has not set out to "make a book," rather it grows from him, free, luxuriantly, indifferent to the formulae of the expert, but far more masterly than that of the expert whose craftsmanship becomes, at a certain time in one's reading life, so difficult to endure. (57)

Ciolkowska continues here to promote novels built on the synthesis of objectivity, subjectivity, and innovative narrative techniques. Like the novels she attempts to hold up as models for innovation, she values the well-roundedness and integrity of the author as an individual genius, rather than an identifiable expert in a given genre—the same argument Pound made in *The New Age* in February of 1917.

The issue of June 1917 continues the discourse on the realist novel's social function. Ciolkowska's "Passing Paris" column discusses the "prediction craze" on how the war will alter the whole of civilization: art, science, cultural forms, even cuisine (71). She ends up affirming the ineluctable indeterminacy of the post-war future, an interesting comment to make in light of the fact that for the past year she has been promoting novels that embody a definitive and new social/aesthetic order. This article is followed by Ezra Pound's review of T.S. Eliot's *Prufrock and Other Poems* as published by The Egoist Press (72-4), by a collection of excerpts from criticism of Joyce's *Portrait* as published by the Egoist Press—"James Joyce and His Critics," which tends to focus on realism, scandal, and religion—followed by "Authority, Liberty and Function" by Huntly Carter, a survey of ideas on post-war social renewal. It is in turn followed by an installment of Wyndham Lewis' novel *Tarr*. The editorial unity of this issue

places it front and center in the debate in print culture over aesthetic forms and post-war renewal.

The issue of September 1917 is organized around the role of art in projections of post-war renewal and internationalism, in which science and the novel figure prominently. Ciolkowska's French prose column affirms the sound logical, artistic, and scientific merit of Jules Romains' novel *Mort de Quelqu'un*. First, she admires the narrative technique as it embodies the novel's method of "unanimism," implying also "solidarity" and "interdependence."

All things, according to M. Romains, man and matter, thought and deed, are echoes of one another and react upon one another. And he proves the theory through the medium of art ;a narrative beginning with a death—the death of an obscure little man, a retired engine-driver—and woven round this death, wherein the deceased is always the pivot of the recounted events.

M. Romains may not have thought of the actual word "unanimity," but its meaning was most undoubtedly the motive of the work. He kept it in mind all the way through the narrative, as Whistler kept his colour-scheme in mind all the way though a picture. He proves it by evidence. Indeed one may say that every word in the book has been written with the full intention of demonstrating the theory. And the result has been attained with the precision which always escorts the testimonies of those sure of their case. (119)

Ciolkowska equates the undergirding theoretical system of the novel with a scientific inquiry that is proved "by evidence": Romains "proves how all in this world diverges to converge" and "is always alive to its incessant metamorphosis from concrete to abstract, abstract to concrete" (120). For that reason, she asserts that the funeral scene which takes place in a church "might be reminiscent of Mr. Joyce," concluding that "[r]omance and philosophy form an alliance" to make Romains' novel "a discovery justifying itself not only by reason of its own character, but by reason of the example he gives of its literary as well as of its scientific potentialities" (120). In that way, Ciolkowska synthesizes all of the foregoing discourse on science and the novel in order to state that Romains, like Joyce, combines romance and philosophy to create vital and scientifically valid novels. Like her prior columns, as well as articles by Fletcher and Carter, the

French and Russian novelists are looked upon as models for the vanguard of English letters, an internationalist outlook frowned upon during this time of the war.

The internationalist perspective is taken even further two pages later in Huntly Carter's "The Rebirth of the Importance of France."

France has a more important business on hand than merely helping to patch Peace. It has a practical scheme for saving its own soul and those of all other nations. England, as we know, has not got so far. It has arrived only at a scheme for saving its neck. It hopes to do so by getting rid of the war debt—some day. Actually, France is experiencing a rebirth of importance. From what we may conceive to be the earliest times, it has aspired to be the spiritual inspirer to the world, and has, accordingly, transmitted more than one brilliant beam to the dark and lonesome land sometimes miscalled Merry England. (122)

The rest of the essay is about national, international, and aesthetic renewal after the war, advocating the wholeness and unity of form as directly responsible for bringing it about. As such, it is continuous with discourse of the novel discussed above, in which French and Russian novelists are held up as models for innovation to a dark and tardy England. This discussion of national origins as they pertain to human and aesthetic renewal has a kind of Edenic and Apocalyptic theme that partially accounts for the enormity of effect this sort of statement would have in the wartime British periodical press. It is this kind of open receptivity to foreign influence that characterized the efforts of Eddington and his colleagues to bring Einstein—as a German scientist no less—to notoriety in Britain.

Another important synthesizing gesture of the discourse of science and literature in *The Egoist* is Huntly Carter's "Three New Words" in the issue of December 1917. Carter, like Pound, Dora Marsden, and other contributors, discusses science and scientific language as harbingers of correct thinking and carrying the power of aesthetic and social renewal. He claims that literary types need more science, that not enough of it is found in other literary periodicals, but that *The Egoist* alone provides enough philosophical material. The essay makes

very explicit connections between language and the social condition.

It has been reserved for this age to flit along Grub Street with all the brilliance of accomplished crumminess upon it. For proof turn to any of the small news-sheets, the Free, New, Independent, little or large Reviews. There we shall find plainly enough that the present-day literary person has no philosophy and no art to go on. And all the science in him is just sufficient for the careful rounding of his periods in a formal and disciplinary way. If he possessed philosophy he would know that the pressing need of the moment is not club conversation touched up with sticky literary varnish, but a philosophy of language. The fact is that our language demands to undergo the process which language underwent in the eighteenth century in France, when a number of brilliant French philosophers prepared it to play the greatest part in the progress of the French mind towards the Revolution. These writers took words and so handled them that they received their full value and force in a scheme of language which became, in its perfection, so effective in propagating ideas that these very ideas brought crashing down the colossal structure which grew out of the strength and weakness of the ancient monarchy.

Perhaps alone among contemporary journals, *THE EGOIST* is satisfying this demand. It has done a very great deal indeed, on its philosophic side, to inaugurate the new reign of philosophy. And this no doubt in the certainty that under its influence the significant word will positively recover its function as the master-builder of civilization, and never again be left to defeat the true ends of individual and social advance.

Words are elements of reconstruction. This means that reconstruction, after the re-entry of words moulded in reality, will proceed apace. (174)

As the article ends with three titular ejaculatory neologisms—"SOCIOCRACY," "CREVOLUTION," and "OFFICIENCY" (174)—it is difficult to say whether Carter's attitude is that revolution and reconstruction are possible with the right words but that they have not been devised yet, or that the very idea is stupid. Nonetheless, the role of clear language, the philosophical undergirding of art, and the scientific honesty of realistic presentation all combine in the *Egoist* program of aesthetic and social revolution, of which the novel is at the forefront.

Finally, before turning to *The Little Review*, and then to the next chapter, which will situate the development of *Ulysses* in all of the discourses traced here, we must look at the January 1918 issue of *The Egoist*, the "Henry James Number." It begins with T.S. Eliot's "In Memory of Henry James," on how the status as foreigner wherever he went enabled him to create true American characters who could become Europeans—something that no European

could do (1). Eliot also states that the heroes of James' novels are really social entities of which men and women are constituents. This notion of a novel as embodying an abstract essence in the real continues the recent discourse, discussed above, on novels dealing with science. Eliot also uses scientific (chemical) metaphors to describe literary influence. The piece is immediately followed by Pound's "The Middle Years," which identifies the "remaining great adventure is precisely the approach to the Metropolis": this could be an important item that inspired Joyce to write the "Wandering Rocks" episode (2). Pound's article surveys micro-generations of novelists and their limited sensibilities, identifying Hueffer, Wyndham Lewis, and Joyce as the new greats, and continues his emphasis on the novel as an instrument for developing new and better sensibilities.

The rest of the issue connects the special articles about James to the trains of thought we have seen in the magazine over the past couple of years, namely that the novel should be an emotionally vital and factually realistic account of a whole person or society. The Short Reviews section judges *The Fortune* by Douglas Goldring as an unsuccessful *Bildungsroman* because it does not develop a well rounded sensibility and is too intellectual (10). It also reviews Edith Wharton's *Summer* with a gesture ending all novels of its kind—a "Boston" novel with "deliberate and consistent realism" that will will "certainly be considered 'disgusting' in America" (10). The notion of the "end of the novel" is a theme that will gain momentum over the next several issues and specifically in criticism of the novels of Dorothy Richardson and of Joyce's *Ulysses*. This number also features an announcement for *Ulysses* to begin in the next (March) issue, though due to legal troubles the run did not begin until 1919 (15).

The next issue of February 1918, continues all of these discourses. Diego Angeli

discusses Joyce's *Portrait*, wholeness and unity, and the new novel genre that "ends the novel as we know it" ("Extract" 30). In his praise of Joyce, Angeli compares the *Portrait* to "certain modern paintings in which the planes interpenetrate and the external vision seems to partake of the sensations of the onlooker" (30). Like the other reviewers of Joyce, Angeli applauds the "profound synthetic naturalism" and hails Joyce as "a new writer in the glorious company of English literature, a new writer with a new form of his own and new aims, and he comes at a moment when the world is making a new constitution and a new social ordinance" (30). Thus, the climate of the "end of the novel" just as *Ulysses* is beginning its serial run—in other words, the beginning of the High Modernist novel—occurs in a material context where new forms of literature are explicitly linked with post-war social renewal, and in which the novel genre is associated with scientific accuracy and human liberation. This context is not specifically British or European, because the same periodical network extended to the United States, where *The Little Review* employed some of the same players and thereby presented some of the same discourses.

Science and Experimental Fiction in *The Little Review*

The Little Review (1914-1929), edited by Margaret Anderson and Jane Heap, was an American avant-garde magazine initially published in Chicago that later moved to New York City. It originally bore the subtitle "Literature Drama Music Art," but in the June 1917 issue, upon Pound's new role as Foreign Editor, it changed to "A Magazine of the Arts, Making No Compromise with the Public Taste." Sounding an iconoclastic tone, it featured polemical articles and book reviews that covered every aspect of culture—sexology, anarchy, socialism,

poetry, the war, economics, and more. The magazine offered creative and critical works that addressed every aspect of the arts and sciences in an attempt to create a new, more democratic social order based on liberty of the self (or “egoism”). In this way, the magazine formed an ideological connection between Pound, *The Egoist*, and by extension some of Joyce’s work in the focus on the wholeness and unity of the self and of civilization.

One typical issue of *The Little Review* around the time it started to become pertinent to Joyce is the first number of volume three, March 1916. The paratexts give a clue as to the interests of the magazine’s readership and its producers. Facing page one is an advertisement for *Socialism and War*, by Louis B. Boudin, a Marxist study of the Great War in which “[a]ll phases of the war are covered, including the ‘cultural’ and ‘racial,’” and in which “[t]he historian, the economist and the sociologist unite in a volume of the utmost interest and importance.” The emphasis on wholeness and unity through interdisciplinarity here is striking.

This issue also contains several pages of book advertisements, categorized by subject matter, the sales of which would benefit the magazine. These ads ran for months and sometimes more than a year at a time. The General section contains a book on cinema called *The Art of the Moving Picture* and a “mental autobiography” by Lester F. Ward titled *Glimpses of the Cosmos* (42). There is an entire section devoted to Sexology that features: “the great sex book of the day”—Forel’s *The Sexual Question*—“[a] scientific, psychological, hygienic, legal and sociological work for the cultured classes” that deals with “love and other irritations of the sexual appetite,” “a profound revelation of human emotions,” an exposition of “Degeneracy,” and a discussion of birth control: “Should be in the hands of all dealing with domestic relations. Medical edition \$5.50. Same book, cheaper binding, now \$1.60”; under the tag

“Painful childbirth in the age of scientific progress is unnecessary” we find *The Truth About Twilight Sleep* by Hanna Rion (Mrs. Ver Beck), “a message to mothers by an American mother, presenting with authority and deep human interest the impartial and conclusive evidence of a personal investigation of the Freiburg method of painless childbirth”; *The Small Family System: Is It Immoral or Injurious?* by Dr. C. V. Drysdale, asserting that “[t]he question of birth control cannot be intelligently discussed without knowledge of the facts and figures herein contained”; *The Limitation of Offspring by the Prevention of Pregnancy* by Dr. Robinson, expounding “[t]he enormous benefits of the practice to individuals, society and the race pointed out and all objections answered”; and several other books on the “scientific” aspects of sex and society, cheekily sold “only to physicians, jurists, clergymen and educators” (43). Under Fiction we find: *An Anarchist Woman* by H. Hapgood, a novel that “points out the nature, the value and also the tragic limitations of the social rebel”; *A Far Country* by Winston Churchill, a novel that presents “another realistic and faithful picture of contemporary American life”; *Never Told Tales*, a fiction that presents “in language that is simplicity itself, the disastrous results of sexual ignorance” and which “should be read by everyone, physician and layman, especially those contemplating marriage”; *Violette of Pere Lachaise*, by Anna Strunsky Walling, recording “the spiritual development of a gifted young woman who becomes an actress and devotes herself to the social revolution”; *The Freelanders*, by John Galsworthy, which “[g]ives a large and vivid presentation of English life under the stress of modern social conflict, centering upon a romance of boy-and-girl love”; H. G. Wells’ *The Research Magnificent*, which “[t]ells the story of the life of one man, with its many complications with the lives of others, both men and women of varied station, and his wandering over many parts of the globe in his search for the best and

noblest kind of life”; and *The Star Rover* by Jack London, about a man unjustly accused and imprisoned for murder, who “proves the supremacy of mind over matter by succeeding, after long practice, in loosing his spirit from his body and sending it on long quests through the universe, finally cheating the gallows in this way” (43). This section also contains works by such well-known writers as Anatole France, Theodore Dreiser, James Stephens, and Oscar Wilde. The Art section features *The Romance of Leonardo Da Vinci* by J. A. Anderson, which “[s]ets forth the great artist as a man so profoundly interested in and closely allied with every movement of his age that he might be called an incarnation of the Renaissance” (43). The Science and Sociology section contains Walter Lipmann’s *Drift and Mastery*, “[a]n attempt to diagnose the current unrest” (43).

“Science” seems to mean here anything that is presented as a “proof” for some truth that is either not self-evident or willfully repressed by the dominant culture. Since the primary generic property of the periodical is a juxtaposition that engenders an editorial unity either deliberate or serendipitous, what is striking about the advertisements above is their focus on knowledge for the sake of personal liberty and social renewal. The ads for both the fiction and non-fiction works present the same attitude. In most of the non-fiction books, especially Boudin’s study of the war and Forel’s *Sexual Question*, the epistemology is both interdisciplinary and “scientific”—not necessarily scientific in the specialized sense of utilizing a method with repeatable and falsifiable results, but as it was understood by a generally educated audience of the time. Rion’s book explicitly links scientific progress with less painful child birth. These works seek to use a variety of disciplines in order to present a more whole and unified approach to humanistic understanding of the war, sexuality, health, and other issues, for the purpose of

social improvement. The ads for fiction books present a similarly “scientific” outlook. London’s novel that “proves the supremacy of mind over matter” by sending the spirit on a journey throughout the universe has a decidedly astronomic appeal that seeks to unite the self with the physical cosmos. Wells’ novel tells the life of a whole man in relation to people of all social ranks as he travels the entire globe in search of better living. Walling’s novel is about an artist whose individual talents aid the social revolution. *Never Told Tales* is a fictional analogue of the sexology books that espouse birth control and frank sexual knowledge as a means of improving society through the liberating effect of individual understanding. Thus, the book advertisements are clearly edited toward an audience interested in a holistic application of all the arts and sciences for the sake of individual empowerment and social renewal through scientific knowledge. Nearly all of the novels are advertised as having a scientific importance of some sort.

The magazine’s primary content is no less concerned with wholeness, unity, and individualism. The March 1916 issue features creative and critical pieces that display an interest in wholeness and unity through interdisciplinarity. A footnote for the poem “Stravinsky’s Three Pieces, ‘Grotesques,’ for String Quartets” by Amy Lowell states that “[t]he poem is based upon the programme which M. Stravinsky appended to his piece, and is an attempt to reproduce the sound and movement of the music as far as is possible in another medium” (7n.). Likewise, a manifesto called “Dont’s for Critics” by Alice Corbin Anderson rails against the confusion of Imagism with *vers libre*, finishing with a statement about science and modernity.

Don’t discard the past for the future, of the future for the past. We learn about the earth from the telescope, and about the stars from the microscope. (14)

In these two pieces there is an attempt on the one hand at the synaesthetic, mimetic representation of another art and on the other a wish to unify past, present and future through a more nuanced and less demagogic application of literary criticism. Both pieces express an interest in form as a means to knowledge.

The entire run of the magazine was likewise interested in matters of wholeness and unity in all areas of the arts and sciences. In the April 1916 issue, an editorial review of the play *Les Cathedrales*, in London, starring Sarah Bernhardt, discusses her “use of Eastern methods for Western ideas,” concluding that “[p]lagiarism is an irrelevant charge to bring against an artist, but acknowledging an artistic right to adaptation means expansion and, despite nationalism, a universal one-ness” (33). The October 1917 number contains an advertisement for *The Contingency of the Laws of Nature* by Emile Boutroux, who “has restored to man his thoughts and feelings that reality and effective influence over the course of things which common sense attributed to them” (44). The next page features an elaborately laid-out ad for J. C. Snaith’s novel *The Coming*—about a soldier who learns to forget how to hate, a vicar who voices the people’s opposition, and the everyday John Smith, working for the “brotherhood of man”—with the tag “Does This Amazing Novel Forecast the Way to Peace?” (45). Of importance here are the notions of a play that should aim at “expansion” and universal unity, a book about science that “restores” human agency over reality, and a novel that might possibly solve the Great War.

Since most of the *Little Review*'s literary content consists of poetry, the April 1916 issue is notable in that it features a letter by Ezra Pound that draws readers' attention to two novels in *The Egoist* and developments in the British avant-garde.

I am glad to see in it [the January-February 1916 issue of *The Little Review*] some mention of Eliot, who is really of interest.

The Egoist is about to publish Joyce's "A Portrait of the Artist as a Young Man" in volume form (since no grab-the-cash firm will take it) and do Lewis's "Tarr" as a serial. I think you will be interested in the two novels, and I hope you will draw attention to them, and to the sporting endeavor of *The Egoist* to do in this dark isle what the *Mercure* has so long done in France, i.e., publish books as well as a magazine.

Incidentally, Chicago should not depend on New York for its books. (36)

Consistent with national rhetoric in *The Egoist*, as discussed above, Pound implies that America is just as behind as Britain in terms of literary innovation. He also picks up Harriet Shaw Weaver's discussion in the March 1, 1916 number of *The Egoist* regarding the difficulties of publishing Joyce's *Portrait* as a single volume due to censorship. The two periodicals are very aware of the intimate relationship between magazine and book publishing for the dissemination of modernism. A full-page ad for *The Egoist* highlights the beginning serialization of Lewis' novel *Tarr* and the variety of other content, including Marsden's philosophical essays, the literary criticism of Aldington and Flint, the social criticism of Carter and, more prominently, the fiction reviews of Ciolkowska.

In the March 1917 issue, Jane Heap writes a quick but enthusiastic word on Joyce's *Portrait*. Whereas the British readers in *The Egoist* respond primarily to the psychological and social realism, of the novel as well as the clear prose, the American editor seems to place more value on the novel's vitality.

James Joyce: There isn't time for me to write about James Joyce's *The Portrait of the Artist as a Young Man* in this issue. It came too late from the publisher. So far as I have seen the whole comment of the reviewers has been on the background for the portrait: "The social, political, and religious life of Ireland today", etc. But there is the portrait itself—bearing a slight resemblance to the Playboy, a strong sensitive romancer; and the painting of the portrait—spontaneous, masterly, free: the color like this: "The spell of arms and voices: the white arms of roads, their promise of close embraces and the black arms of tall ships that stand against the moon, their tale of distant nations."

Next time I shall have something more to tell of Joyce,—something thrilling and personal. ("James Joyce" 17)

At this point, though book reviews and ads in *The Little Review* often evoke the scientific "verity"

of novelistic realism, the editors' interest seems to lie more in the conventional novelistic traits of entertaining or dramatic narrative. This will change by 1918, where the fictional experiments will start to manipulate space and time with reference to astronomy, while the criticism will start to reflect an interest in hard-lined realism (which will be discussed at length in the next chapter).

In the May 1917 issue, Pound announces his departure from *Poetry* magazine by stating that he joins *The Little Review* in order to “aid and abet *The Egoist* in its work,” namely the publishing of Joyce's *Portrait* and Lewis' *Tarr*.

I see no reason for concealing my belief that the two novels, by Joyce and Lewis, and Mr. Eliot's poems are not only the most important contributions to English literature of the past three years, but that they are practically the only works of the time in which the creative element is present, which in any way show invention, or a progress beyond precedent work. The mass of our contemporaries, to say nothing of our debilitated elders, have gone on repeating themselves and each other. (5)

In that way, his increasing emphasis on the novel as the best genre for literary innovation is also carried out here in the pages of *The Little Review*.

The next issue, June 1917, features advice from a reader, Louis Pueklis of Cambridge, Massachusetts, on how best to change the scope of the magazine: “It will do better, I believe, to take for its province: Literature, Life, Science; all the fine arts are too much for its scope; each has its own organs” (32). In response, Jane Heap writes: “Your advice about reducing to Literature, Life, Science, is a great compliment to our scope, but—well, for the present we can't take up such limited and special subjects as Life, or such obvious and untaxing ones as Science.--*jb.*” (32). It is unclear if this is meant to be ironic, or a negative attitude toward science which is seen as simplistic, or a sarcastic response to a comment purportedly about reducing the scope that actually urges a monumental expansion. At any rate, though *The Little*

Review advertises many books described as scientific, its own exploration of the subject, as well as of the novel, is far less complex or considered than that of *The Egoist*.

The issue of September 1917 features “Inferior Religions,” an essay by Wyndham Lewis that is to serve as an introduction to an upcoming volume of short stories, which forms a theory of the novel in association with rupture in scientific tradition.

The wheel at Carisbrooke imposes a set of movements on the donkey inside it, in drawing water from the well, that it is easy to grasp. But in the case of a fishing-boat the variety is so great, the scheme so complex, that it passes as open and untrammelled life. This subtle and wider mechanism merges, for the spectator, in the general variety of Nature. Yet we have in most lives a spectacle as complete as a problem of Euclid.

Moran, Bestre and Brobdignag are essays in a new human mathematic. But they are each simple shapes, little monuments of logic. I should like to compile a book of forty of these propositions, one deriving from and depending on the other.

...

All religion has the mechanism of the celestial bodies, has a dance. When we wish to renew our idols, or break up the rhythm of our naivety, the effort postulates a respect which is the summit of devoutness. (3-4)

In acknowledging the difference between the completed picture of a scientific or mathematical expression and the idiosyncrasy of Nature that these fail accurately to transcribe, Lewis is making a far more serious case than Pound for the failure of realism along the lines of the failed “old science” (Euclid). However, consonant with Pound and other thinkers in both *The Little Review* and *The Egoist*, Lewis advocates the interdependently organized book marked by an effusive vitality and an ability to capture within it the minutiae of reality. The “new human mathematic,” the dance of the “mechanism of celestial bodies” should be the basis for the new novel, a call that Joyce seemingly responds to in his organization of *Ulysses* according to the range of arts and sciences and the living detail of Dublin's mechanical dynamics.

Before *Ulysses* began its serial run in the March 1918 number of *The Little Review*, the magazine's discourses on the novel, on science, and on the connection between the two are not as prominent as those of *The Egoist*, though they do exist to a moderate extent. The short

reviews and advertisements use science as a selling or a summary point, particularly as it might suggest a liberated point of view. In the next chapter, we will see how the inclusion of *Ulysses* segments increases that discourse throughout 1918 and 1919 in tandem with *The Egoist*.

Conclusion

In many ways, *Ulysses* is the complete embodiment of discourses of science and the novel running through the magazines that eventually serialized it. It presents, through a new sensibility, the utmost of social and psychological realism within a fantasia of styles and a meticulously unified symbolic structure. Completing the program of Flaubert, it catalogs, critiques, and brings to life the high, middle, and low of the early Twentieth Century. Through its clarity of language and actual incorporation of aspects of science, including, as we shall see, Einstein's relativity theories and Cantorian set theory, it unifies all aspects of the humanistic crises in a system that allows for the idiosyncrasy and aberration that, for Joyce, defines humanity.

Chapter 2: *Ulysses* and Einstein in the Wartime and Post-War Avant-Garde, 1918-1921

The bases of our physics seemed to have been put in permanently and for all time. But these bases dissolve! The hour accordingly has struck when our conceptions of physics must necessarily be overhauled. And not only these of physics. There must also ensue a reissuing of all the fundamental values. The entire question of knowledge, truth, and reality must come up for reassessment. Obviously, therefore, a new opportunity has been born for philosophy, for if there is a theory of knowledge which can support itself the effective time for its affirmation is now when all that dead weight of preconception, so overwhelming in Berkeley's time, is relieved by a transmuting sense of instability and self-mistrust appearing in those preconceptions themselves.

— Dora Marsden, "Philosophy: The Science of Signs XV (*continued*)—Two Rival Formulas," *The Egoist* (April 1918): 51.

The incorporation of science into the technique of *Ulysses* is part of the novel's second phase of development, beginning in mid-1918, when Joyce abandons the initial style in favor of continued experimentation. Michael Groden asserts, with Goldberg, that "the 'novel' *Ulysses* ended with 'Scylla and Charybdis,'" and that "'Wandering Rocks' and 'Sirens' involve variations on the monologue method" by extending it to characters other than Stephen and Bloom (38). He notes further that in order "[t]o supplant the initial style Joyce first turned to a succession of new voices: an unnamed debt collector; the writers of legal briefs, newspaper reports and features, and scientific accounts; the authoress of a romantic Victorian novel; the great prose writers in English literary history" (43). The technical changes of "Cyclops," "Nausicaa," and "Oxen of the Sun" may have been accompanied by "a new, more elaborate process of notetaking to precede his writing," since these "are the first episodes for which large groups of notesheets have survived" (Groden 43).

Science, therefore, is incorporated into *Ulysses* at the point in which its schematic and symbolic efflorescence begins to take root during the second development phase, and is later

added into earlier episodes when Joyce makes revisions and composes on the proofs and placards ahead of the initial book publication. The scientific aspects come to be seen by Joyce as integral to a wider range of discourses in the encyclopedic representation of humanity. One of the major aspects of “Wandering Rocks” is that it represents the first break from the initial style by reporting the consciousnesses of other characters. This is even more significant in light of the fact that the chapter also uses Einstein's special relativity to bring that change further. Furthermore, the novel's fundamental technique, the mythic method—in which each episode presents a scene from modern Dublin peopled by characters and situational analogs from an episode of the *Odyssey*—becomes associated with non-Euclidean geometry and Einsteinian space-time as Joyce begins composing “Ithaca” in early 1921.

The scholarship of *Ulysses* and physics¹⁷ tends to compare the novel's metaphysics with those of Einstein's theories or to address the scientific content of the “Ithaca” episode. While these studies continue to illuminate, the field has not sufficiently addressed (1) the technique of “Wandering Rocks,” which instantiates a non-Newtonian space-time, (2) the use of non-Euclidean geometry and set theory in “Ithaca,” which has profound implications on the notion

17 M. Keith Booker, “Joyce, Planck, Einstein, and Heisenberg: A Relativistic Quantum Mechanical Discussion,” *James Joyce Quarterly* 27:3 (1990): 577-586; Joseph A. Buttigieg, “The Struggle against Meta (Phantasma)-Physics: Nietzsche, Joyce and the ‘Excess of History’,” *Boundary 2: An International Journal of Literature and Culture* 9:3 (1981): 187-207; Avrom Fleishman, “Science in Ithaca,” *Wisconsin Studies in Contemporary Literature* 8:3 (1967): 377-91; Alan J. Friedman, “*Ulysses* and Modern Science,” *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 198-206; Michael Partrick Gillespie, “(Meta)physics and ‘the Portals of Discovery’: Literary Criticism and the New Physics,” *James Joyce Quarterly* 34:4 (1997): 597-612; John Hannay, “The Throwaway of ‘Wandering Rocks’,” *James Joyce Quarterly* 17 (1980): 437; Ihab Hassan, “Joyce and the Gnosis of Modern Science,” *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 185-190; Alan David Perlis, “The Newtonian Nightmare of *Ulysses*,” *The Seventh of Joyce*, Ed. Bernard Benstock, Bloomington: Indiana UP, 1982: 191-197; David W. Robinson, “Stephen Dedalus’ Physics Lesson,” *James Joyce Quarterly* 24:3 (1987): 359-360; Mario Salvadori and Myron Schwartzman, “Musemathematics: The Literary Use of Science and Mathematics in Joyce’s *Ulysses*,” *James Joyce Quarterly* 29 (1992): 339-55; Stephen Whittaker and Francis X. Jordan, “The Three Whistles and the Aesthetic of Mediation: Modern Physics and Platonic Metaphysics in Joyce’s *Ulysses*,” *James Joyce Quarterly* 33:1 (1995): 27-47. Further quotations will be cited parenthetically in the text.

of parallelism in the novel's mythic method, and (3) the material sources through which contemporary physics made their way into Joyce's work. This chapter fills in those three gaps by means of recent methods in the new modernist studies and genetic criticism, which have yet to be applied to scholarship of Joyce and science. In this chapter I will show for the first time that "Wandering Rocks" is the earliest incorporation of the new physics, specifically the special theory of relativity, into Joyce's work. A genetic analysis of the manuscript evinces not only Joyce's thought processes as he created relativistic event-structures, but shows relativity to be integral with the discourse of avant-garde magazines he was reading during the episode's conception and development. Thus, "Wandering Rocks" emerges in a material culture where new ideas on astronomy and physics directly affect philosophical and artistic inquiries into the individual's relationship with the social and physical worlds. The "Ithaca" episode presents a direct treatment of astronomy, physics, and geometry with sources in outdated textbooks and Bertrand Russell's *Introduction to Mathematical Philosophy* (1919), a major treatise in number and set theories and a step forward in modern logic. As such, "Ithaca" has less to do with contemporary culture than it does with the nature of the parallel relationship in the Homeric paradigm. I will show for the first time that the relationship is underpinned by a non-Euclidean geometry with intersecting parallels, forming the basis of an essentially Einsteinian space-time for the episode's astronomic events and their meaning. The results have broader implications for the study of *Ulysses* as well as the history of literature and science.

The Scientific Context of "Wandering Rocks"

"Wandering Rocks" was composed on the cusp of Einstein's popularization in the immediate

aftermath of the First World War. Joyce began writing *Ulysses* in 1914, nearly ten years after Einstein published the special theory of relativity in 1905, and continued working on it well after the general theory was published in 1916. Though Einstein's theories were revolutionary within the field of physics, they did not become known outside that specialized arena until the end of 1919. On November 6 of that year, Arthur Eddington addressed a joint meeting of the Royal and Royal Astronomical Societies to announce the first experimental substantiation of the general theory of relativity. On the next day, newspapers transmitted to the general public a shocking set of facts about the universe: an object's rate of time and mass will increase or decrease depending on its velocity; differently moving observers will obtain varying yet equally true measurements of that object's length, width, mass, and velocity; space and time exist on a four-dimensional continuum known as space-time; gravitational attraction is the warping of space-time around bodies, rather than the direct action of forces between them; the universe is in a constant state of expansion; there is no such thing as simultaneity or an absolute chronology; and a minuscule amount of matter can release an enormous amount of energy (embodied in the now-famous equation $E=mc^2$). These notions completely upended the assumptions of Newtonian mechanics, which in the general culture—as implied by the epigraph of this essay—were deemed to be the very basis of civilization itself. Reactions to the new theory varied, but those of an avant-garde bent tended to embrace its revolutionary impact as an opportunity to reevaluate a broad range of humanistic endeavors.

Consistent with that trend, the magazines that were serializing *Ulysses* during the development of “Wandering Rocks”—*The Egoist* and *The Little Review*—exhibited an increasing interest in new physics and astronomy as analogs of their anti-statist views. Frank Budgen, who

helped Joyce to draft the episode's fair copy manuscript, associates physics with the magazines' philosophical leanings when he states that Father Conmee and the Viceroy represent “the static forces of Church and State, restraining the destructive forces of wandering anarchic individualism” (121). This direct reference to the individualist-anarchist philosophy of *The Egoist*—“An Individualist Review”—as well as its American sister magazine *The Little Review*—“Making No Compromise With The Public Taste”—shows not only the importance of individualism to Joyce but connects it to the physicality of urban life. In that way, “Wandering Rocks” seems to embody a metaphysical argument about space and time that blends with competing views of the individual's relationship with the social and physical realms. This cross-fertilization of physics with a modernist humanism could certainly have inspired Joyce to base his portrait-in-motion of Dublin on a revolutionary physical model.

Given this context, we should reconsider Joyce's designation of mechanics as the art of “Wandering Rocks.” The term is usually understood to refer ironically to the characters' automatic responses to social authority, for they actually exhibit a significant degree of independence in ignoring or half-saluting Conmee and the Cavalcade. However, the episode's astronomy motif and intrusion technique imply mechanics as something beyond the markers of social conformity. The intrusion technique inserts text from one section of the episode into another, often with changes, in order to suggest the simultaneity of the two separately located events. A handful of scholars has suggested that the technique might have something to do with science. For example, M. Keith Booker describes the stylistic and metaphysical affinities between Joyce and contemporary science, suggesting that “the ‘jerky’ flow of time in ‘Wandering Rocks’ is exactly the sort of narrative development that might occur if the episode

were being related by a series of narrators in different relativistic frames of reference” (582). We can take that suggestion much further if we consider the likelihood that Joyce meant by mechanics the branch of physics that describes an object's change in location over time, which is the primary method of astronomy. Indeed, Budgen describes the episode in terms that refer directly to astronomic mechanics.

According to their directions and velocities their position at any time is noted, for they are all regarded in a twofold sense. They are human souls bound together by psychological ties, as, for example, ties of family, religion, friendship, enmity, citizenship, interest; and they are also bodies, isolated masses of matter moving through space. The viewpoint changes from one sentence to another so that the reader must be continually on the alert to follow the variations of scale and angle. The view constantly changes from a close-up to a bird's-eye view. A character is introduced to us at close-up range, and suddenly, without warning, the movement of another character a mile distant is described. The scale suddenly changes. Bodies become small in relation to the vast space around them. The persons look like moving specks. It is a town seen from the top of a tower. The spiritual attributes of each person remain what they were, but all, as individuals, become small in relation to the city that contains them. (124)

Budgen also reminds us that Bloom's hobby is astronomy, referring to him in an Einsteinian manner as a “spacetimehound” (93) and “vendor of spacetime” (97). These recollections from Joyce's temporary amanuensis reveal of the extent to which astronomy and mechanics—in the sense of physics—underpin the design of “Wandering Rocks.” Moreover, the multiple perspectives suggest an Einsteinian, rather than a Newtonian, mechanics, and also one that is more adept at uniting the humanistic dimensions of the episode. Granted, Budgen's recollections were written during the 1930s and possibly project later knowledge (or critical spin) retroactively onto the episode's composition in early 1919. Nonetheless, there is a clear sense that astronomic mechanics is integral with the symbolic connections and humanist perspective of the episode.

The Relativistic Space-Time of “Wandering Rocks”

If mechanics is the branch of physics that describes an object's change in location over time, then the intrusion technique of “Wandering Rocks” does just that: the sections track with precise detail the characters' movements around parts of Dublin over discrete periods of time, inserting lines from other sections so as to imply the simultaneity or chronology of the compared events. It is significant that Joyce indicates forces, objects and places as the people of the episode. Rather than focusing primarily on Leopold Bloom or Stephen Dedalus, the subject is Dublin itself, seen equally through most of the peripheral characters by a narrating consciousness that jumps around in space and time. The technique forces the reader to observe through parallax¹⁸ the events plus the social or psychological factors that bind them. This produces the effect of a centerless universe with a number of local “nows” instead of a universally consistent chronology, which roughly approximates the difference in worldview between Newton's mechanics and the localized frames of reference espoused by Einstein. Given the astronomy motif that pervades the episode, as well as the dates of its composition, it is tempting to read it as an early application of Einsteinian mechanics in fictional prose.

“Wandering Rocks” features astronomy and the frame of reference as both thematic motifs and structural elements. This portrait-in-motion of Dublin is based on the legend of

¹⁸ Parallax is the apparent displacement of an object when viewed from two or more points. An everyday example of parallax is in human stereoscopic vision. If you look at an object and place a hand over one eye, and then place that hand over the other eye, the object will appear to jump to the left or right. As well, you will probably see more of the left or right side of the object depending on which eye is viewing it at a given time. Parallax is a standard observation technique in astronomy, as scientists often collate data obtained from different telescopes at the same time of day. During the solar eclipse of May 29, 1919, Eddington obtained measurements of the locations of two stars beyond the Sun from one telescope at the South Pole and another on the Equator. The data were different enough to conclude that the light rays emanating from the stars traveled in curvilinear paths through the warped space around the Sun, suggesting the verity of Einstein's general theory of relativity. Full details can be read in Eddington's *Report on the Relativity Theory of Gravitation*, originally published in 1920 but recently reprinted in 2006 by Dover Publications, Inc. of Mineola, NY.

the Wandering Rocks, a lethal maritime danger in the Bosphorous described alternately as *planetai*, rocks that drift randomly about the strait, or as *planktai*, a pair of massive boulders that clash together at the end.¹⁹ *Planetai* is the root of the English word planet, and as such forms the basis for reading the characters in terms of celestial bodies. For example, in section nine M'Coy mentions a book Bloom bought, with plates depicting "the stars and the moon and comets with long tails. Astronomy it was about" (U 10.527-8). In section twelve, Mr. Kernan's gin-warmed vitals and breath radiated as "[h]is frocktails winked in the bright sunshine to his fat strut" (U 10.761-3), like the tail of a comet. In addition to being described like astronomical bodies, these characters observe the world through frames of reference implied by the constant presentation of optical frames such as mirrors, windows, and doorframes. At the opening of section two, Corny Kelleher went to the doorway and "leaned against the doorcase, looking idly out" at the universe of Dublin (U 10.212). Section eleven opens as "[t]he lacquey by the door of Dillon's auctionrooms shook his handbell twice again and viewed himself in the chalked mirror of the cabinet" (U 10.642-3). From his own moving position on the stairs Mr. Power sees the back of Long John Fanning; and in the other reference frame of the mirror (also in relative motion) he can see parallaxically the front of Long John Fanning. "From the sidemirrors," in section eighteen, "two mourning Masters Dignam gaped silently" (U 10.1132-33). These examples engender an aesthetic of framed observation that, together with the astronomy motif, correlate the events of "Wandering Rocks" as if they were being observed from different frames of reference.

19 Jason and the Argonauts are perhaps the best known heroes to have surmounted this danger, suffering only minimal damage to the stern of the Argo, which in Joyce's epic has its analog in the presentation of "Almidano Artifoni's sturdy trousers swallowed by a closing door" that culminates the episode (U 10.1281-2). In the *Odyssey*, the goddess Circe tells Odysseus he may contend either with Scylla and Charybis or with the Wandering Rocks. Though Odysseus opts for the former, Joyce also decided to include the latter.

One of the most significant consequences of Einstein's notion of reference frames is that it makes just as much sense to refer motion to one body as to the other, which is known as the principle of relative motion. This is expressed in "Wandering Rocks" with the crumpled throwaway that Bloom jettisons into the Liffey at lunch time. The throwaway appears for the first time in section four, riding "lightly down the Liffey sailing eastward past hulls and anchorchains" (U 10.294-6). During the throwaway's third appearance, it is still traveling eastward "by flanks of ships and trawlers, amid an archipelago of corks" (U 10.1096-7). But between these two observations, the second one presents a much different articulation of the throwaway's movement.

North wall and sir John Rogerson's quay, with hulls and anchorchains, sailing westward, sailed by a skiff, a crumpled throwaway, rocked on the ferrywash, Elijah is coming. (U 10.752-4)

John Hannay points out that in this passage the grammatical subject comprises the north wall of the Liffey and Sir John Rogerson's quay, taking "sailing" as its verb (437). That is, the wall and quay sail westward while the throwaway remains "fixed." The Newtonian notion of space "at rest" is parodied here. According to Einstein's notions of reference frames and the principle of relative motion, it makes just as much sense to say that the walls of the river sail westward as it does to say the throwaway sails eastward.

The intrusion technique unifies the episode's events by mimicking the scientific observation method of parallax. When certain of the same lines appear in different sections of the episode, the reader receives slightly different data, providing a parallax view of the distant event at the time of its occurrence. For example, in section one Father Conmee steps *onto* an outward bound tram *on* Newcomen Bridge (U 10.107-9). A few lines later we observe the same action again, where Father Conmee steps *into* the outward bound tram *at* Newcomen Bridge,

with the added information that he takes the tram because he dislikes to “traverse on foot the dingy way past Mud Island” (U 10.113-4). Then in section two, observed from the nearby location of O’Neill’s funeral home, Father Conmee steps *into* specifically the Dollymount tram *on* Newcomen Bridge (U 10.213-4). Different aspects of Father Conmee’s journey—which ground he will traverse and which tram he takes—become known from sections set in different locations in Dublin at about the same time. Also, different appearances of Father Conmee’s movements are generated by the subtle play on prepositions (into/onto the tram, at/on Newcomen bridge), indicating that Joyce is very much interested in the grammar of time and space.

In addition to simultaneity, the intrusion technique also makes chronology a tricky measurement. As in Einstein’s universe, in “Wandering Rocks” there is no single, absolute chronology. A poignant example of this appears in a few intrusions in sections one and two. In section one “Father Conmee passed H. J. O’Neill’s funeral establishment where Corny Kelleher totted figures in the daybook while he chewed a blade of hay. A constable on his beat saluted Father Conmee and Father Conmee saluted the constable” (U 10.96-9). A few lines later Father Conmee steps onto the outward bound tram on Newcomen bridge. In section two there is a different chronology of presentation. First Corny Kelleher chews his blade of hay and tots figures in the daybook, then Father Conmee steps into the outward bound tram, and then the constable speaks with Kelleher.

Section 1

- 1a. Father Conmee
- 2a. Corny Kelleher
- 3a. Constable

Section 2

- 1b. Corny Kelleher
- 2b. Father Conmee
- 3b. Constable

In the separate reference frames of each section, each chronology is valid. In section one the

reader is first presented with Father Conmee, then Corny Kelleher, and then Constable 57c. In the second section the first character is Corny Kelleher, then Father Conmee, and then the Constable. The characters' actions are not identical in each section, yet each chronology is unique and complete in itself, and we see things in a different order based on the frame of reference from which they are observed (Conmee or Kelleher). Another example of questionable chronology is Tom Rochford's act-counting invention, which goes from turn six to turn four (U 10.483).

Time and space relationships are not the only aspects of relativity that Joyce might have used. Another space-related phenomenon, according to the general theory of relativity, is gravitation. Einstein held that gravitation is not the action of direct force between bodies but the warping of space around them. Joyce seems to have worked out a spatial law of gravitation based on social conventions of status and outward appearance. Dennis J. Maginni, professor of dancing, attracts notice by his loudly colorful dress (U 10.599-600, 10.1238-40). Father Conmee, who has washed his teeth with arecanut paste, is constantly saluted. Thomas Kernan, preening himself in the mirror, notes that "a dressy appearance... bowls them over" (U 10.738-9). And the Cavalcade, conveying the best-dressed people in town with the greatest of pomp and circumstance, attracts the most attention and salutation. These characters have the ability to make people respond with the same behavior, to pull them into uniform acceleration, as it were. By virtue of their dress and social rank, they call into being the attention of the people around them. Their social and cultural influence causes the physical events of stopping, head-turning, and waving, all of which are rooted in the "fabric" (spatial field) of social convention.

While these behaviors can be seen as a spatial effect of social hierarchy, it is important

to note that the responses exhibit a significant amount of autonomy within that field. Most of them ignore or only half-salute Conmee and the Viceroy. Others are outright mocking, as when “Poddle river hung out in fealty a tongue of liquid sewage” (U 10.1196-7) and Simon Dedalus “stood still in midstreet and brought his hat low” (U 10.1200-1) to cover his open fly, rather than raising it in salute. In that way, wandering becomes not simply moving around, but resistance to the gravitational pull of social forces, engendering a universe marked by a significant amount of individual autonomy. This is more similar to the universe described by Einstein, as opposed to the uniformity of Newtonian mechanics.

The importance of the intrusion technique is that it engenders a set of non-privileged frames of reference that relates events in such a way that the reader does not have a comprehensive view of the field at any one time. This is the essential difference from Newtonian mechanics and has been debated by Joyce scholars for some time now. Salvadori and Schwartzman contend that “[d]espite some learned papers on his awareness of Einstein’s relativity theory and even Heisenberg’s indeterminacy principle, Joyce’s mechanics are totally Newtonian with a strong emphasis on the importance of Newton’s gravitational law” (353). This, I believe, is not the case in “Wandering Rocks,” where space and time do not conform to a classically unified mechanics, and where gravitation can be seen as a spatial effect. Whittaker and Jordan note that the Platonic metaphysical model of metempsychosis can be understood to join disparate times in a manner similar to the observational method of Einstein’s special theory, but claim that the physics of the narrative remain Newtonian (44). Certainly, Joyce did not adopt one or the other physical model exclusively, but only those aspects that suited his artistic ends. In fact, we can regard the physics in a given section as Newtonian, while the whole

episode with its relationships between limited perspectives is Einsteinian. So Booker's suggestion is correct, and the “jerky” flow of time in “Wandering Rocks” is part of a narrative technique that has broader implications than are at first apparent. The movements and timing of the episode are extraordinarily meticulous, yet there are so many chronological and informational discrepancies that they cannot be accidental. It is the limited perspective of spatio-temporal anomalies that makes “Wandering Rocks” a narrative experiment in relativistic mechanics.

The space and time anomalies and the astronomy motif of “Wandering Rocks” might point to an incorporation of relativity, yet it is important to recognize that the episode was initially completed eight months before Einstein's popularization in the mainstream press. Since the episode makes no direct reference to Einstein, we must ask why such a reading is necessary, given that the technique can be read along the lines of cinematic jump-cut, Bergsonian duration, or parallax alone (which predates Einstein). Thus, a connection will have to be demonstrated by reference to changes in the manuscript that reveal a possible knowledge of the theories. Though the next section reveals some striking information, there is no “smoking gun” in the manuscript to indicate a definitive connection, so we will later look to Joyce's reading for further insight.

A Textual Analysis of “Wandering Rocks”

Textual scholars have always found “Wandering Rocks” to be one of the more enigmatic episodes. Not only did Joyce show no evidence of having thought about it as part of the arc of *Ulysses* prior to May 1918, but there is a near-total lack of *avant-texte* that might provide insight

into when, how, and why he did. The episode was serialized during 1919, in the June and July numbers of *The Little Review* and in the December (and final) number of *The Egoist*. At the time of this writing, the only extant pre-publication texts for “Wandering Rocks” are one note sheet, the fair copy draft that is part of the “Rosenbach” manuscript (named after its owner),²⁰ and two fragments of an amateur typescript that was composed from it. The printer's placards and page proofs that were used for the first book edition of *Ulysses* are also available. At the back of the Rosenbach MS there appears a statement signed in Joyce's hand, indicating the manner of its composition: “PP 32-48 were written by my friend Francis Budgen at my dictation from notes during my illness, January-February 1919” (48). Here is a timeline of the episode's development and publication:

- May 1918 or soon after: Conceived.
- May 1918-January 1919: Developed from notebooks to organized notes.
- January-February 1919: Fair copy “Rosenbach” MS completed with help of Frank Budgen.
- February 1919: TS prepared from fair copy MS and sent to Ezra Pound.
- June-July 1919: Serialized in *The Little Review*.
- December 1919: Serialized in *The Egoist* (based on *Little Review* copy).
- August-November 1921: Minor corrections and additions in Joyce's hand on printer's placards and page proofs.
- February 2, 1922: First book publication.

The changes made by Joyce to the 1921 placards and page proofs are mostly handwritten spelling and diction corrections, with the handwritten addition of a few passages that add slang or local color and one that bolsters the astronomy theme.

The Rosenbach MS has several features that suggest Joyce's possible interest in Einsteinian space-time. The passages that are the most relativistic—Conmee stepping into the

20 The “Wandering Rocks” MS used for this study is reproduced in *Ulysses: A Facsimile of the Manuscript*, vol. I, and is cited by its own page numbers.

tram; the series of interactions between him, Corny Kelleher, and the Constable; the three presentations of the throwaway, among others—were written into the left margins or between the lines. This suggests that they were all conceived as a unit. Some marginalia are in Joyce's hand while others are in Budgen's. For example, of the three paragraphs in section one that repeatedly depict Conmee entering the tram, the first two are written in the left margin in Budgen's hand, in pencil, and with no clear indication of where they should fit in the main body of the text, which was written by Joyce in ink. The marginal paragraphs read as follows.

On Newcomen bridge the very reverend John Conmee S.J. of St Francis Xavier's church, upper Gardiner Street stepped on to an outward bound tram.
Off an inward bound tram stepped the reverend Nicholas Dudley C.C. of Saint-Agatha's Church, north William Street, on to Newcomen bridge. (3)

The third paragraph describing Conmee's entrance to the tram was already in the body of the text, penned by Joyce: "At Annesley bridge Father Conmee stepped into an outward bound tram for he disliked to traverse on foot the dingy way past mud island" (3). In this third in-body paragraph, Annesley is crossed out and replaced with Newcomen in the top left margin, written large in Budgen's hand with a thinner pencil, connected by a long line. This suggests that they went back and added the passages together after the primary draft was written out. The intrusion of this event in section two is already in the main text, penned by Joyce, but a marginal note by Budgen in thick pencil similarly corrects Annesley to Newcomen (7). In the MS, this passage ends the opening paragraph of section two, while in the 1922 Paris and 1986 Gabler editions it constitutes a sole paragraph. Thus, Joyce apparently decided to change Annesley bridge to Newcomen across the various iterations of the event, also adding the information about Mud Island in one and allowing the arranger to play with the chronology. These additions together constitute a heightening of the parallax observations—the

different appearances of an event when observed from different locations—and a complication of the temporal flow of events.

The throwaway segments show a similar manner of implementation, with all three of them being added in the margins. The first throwaway passage is written in the left margin, in Budgen's hand with a thick pencil; a line connects it to the end of section four in the main text, written by Joyce (9). The second passage, in which the throwaway remains fixed while the walls of the Liffey move, is written by Budgen, this time with a pen, in the left margin next to a crossed-out paragraph in the main text (in Joyce's hand) about the two midwives with eleven cockles (24). The third throwaway passage was again written by Budgen in small letters with a thin pen, in the left margin and among the stars that separate sections 16 and 17 (39). The main body of this page, which is in the latter third of the MS, was written by Budgen with a thick pen. Given that the throwaway passages were all added marginally, they were probably conceived together as a particular chain of events that play with the notion of relative motion. Also, since they were added around the same time as the Conmee additions in sections one and two, it is apparent that Joyce decided in a coherent fashion, late in the writing process, to add several different event structures that play with the space and time of the narrative. This suggests that they were conceived at the same time, as a unit, and added probably in February 1919 in such a way as to make the chronological and perspectival aspects of three key event-structures more dependent upon frame of reference and parallax.

What prompted Joyce to emend “Wandering Rocks” in this manner? Given the paucity of early *avant-texte*, it is impossible to say for certain, though the episode was conceived during a period in which Joyce was reconsidering the overall structure of *Ulysses*. In his letters up

through May 1918, there is no indication that he was thinking about “Wandering Rocks” at all. In a letter of May 18, 1918, Joyce wrote to Harriet Shaw Weaver about possibilities for whole and fragmentary publication of *Ulysses* by the Egoist Press Ltd., indicating “[i]n all seventeen episodes of which... I have delivered six” (*Letters I* 113). Ronan Crowley has argued convincingly that “Wandering Rocks” was essentially a desk-clearer, a sudden development to pave the way out of the initial style of *Ulysses*. Crowley's suggestions are supported by the lack of notebooks dedicated to the episode—a methodical departure from earlier ones—and what must have been the very quick timing from conception to composition: “Joyce compiled notes on Dublin places and people as a matter of course, not with a 'Wandering Rocks' episode in mind, but once the episode was conceived, the notes were parsimoniously put to that end.” I will add that another motivation could have been a need for funds. In a letter to Joyce dated November 22, 1918, Ezra Pound asks about the book's schema, implying there could be more money if more chapters were to be added.

Has 'Ulysses' 24 Odyssean books?. I dont want to ask silly questions, and I hope it continues forever, but people are continually asking ME about it and about. Fortunately my ignorance of Bloom's future is complete.

Still, let me know, if you know yourself. I will fork up the remaining £20 of the fifty promised, as soon as I get it from America.

If there are going to be chapters after April, I will try to bone a few quid more out of someone. BUTTTTT Khrrisst knows how or where. (*Letters II* 424)

Given that Joyce was planning a return to Trieste, from which he fled to avoid the war, it is possible that he wrote “Wandering Rocks” not only to fund the move but to reflect the geographic and political shifting that occurred after the Armistice of November 1918. It is not difficult to see how astronomy would be a natural model for symbolizing the cataclysmic events of post-war Europe. Still, there is no biographical evidence to suggest that Joyce would have had Einstein (or even the war) in mind for “Wandering Rocks,” so we must look to his reading

for further clues.

Dora Marsden, Physics, *The Egoist*, and *The Little Review*

Joyce's reading from mid-1918 through early 1919 consisted mostly of the periodicals that were serializing or reviewing his work, as well as several contemporary novels, notably *The Rainbow* (1915) by D.H. Lawrence,²¹ *The Voyage Out* (1915) by Virginia Woolf, and *Tarr* (1918) by Wyndham Lewis.²² *The Egoist*, at Pound's instigation, had serialized *A Portrait of the Artist as a Young Man*, had published it in book form, and was also about to begin serializing *Ulysses* (though this was delayed until January 1919). The American *Little Review* was also connected with Pound and began serializing *Ulysses* in March 1918. Joyce usually received punctual copies of these magazines from Pound or Harriet Shaw Weaver, and occasionally used his own funds to purchase them. Around this time, Joyce was also reading somewhat regularly the *London Times*,²³ *Times Literary Supplement*,²⁴ and *The New Statesman*,²⁵ as well as selected issues of avant-garde magazines such as the British *Future*,²⁶ the French *Mercure de France*,²⁷ and the Italian *Umana*,²⁸ *Il Secolo*,²⁹ and *Nuova Antologia*.³⁰ He was combing these magazines for reviews of *Exiles*, which had been published in London and New York on May 25, 1918, but some of them—especially *The Egoist*—contain pieces dealing with science and other topics pertinent to

21 Joyce requests a copy in a letter to James B. Pinker of June 9, 1918 (*Letters I* 114-5).

22 Joyce acknowledges receiving the latter two in a letter to Harriet Shaw Weaver of July 29, 1918 (*Letters I* 115-6).

23 Letter to Harriet Shaw Weaver, October 26, 1918 (*Letters I* 120-1).

24 Postcard to James B. Pinker, August 21, 1918 (*Letters II* 419).

25 Ellmann 443 and letter to Harriet Shaw Weaver of July 29, 1918 (*Letters I* 115-6).

26 Joyce read Pound's articles in the May and November 1918 numbers (Read 133-43).

27 Letter to Harriet Shaw Weaver, October 26, 1918 (*Letters I* 120-1).

28 Ellmann 443.

29 Letter to Harriet Shaw Weaver, July 29, 1918 (*Letters I* 115-6).

30 Letters to Harriet Shaw Weaver of July 29, 1918 and October 26, 1918 (*Letters I* 115-6, 120-1).

“Wandering Rocks.” Joyce seems to have owned complete runs of *The Egoist* and *The Little Review*, if not all at once, then at various times during the composition of *Ulysses*. Pound sent him many issues of *The Egoist* from 1914 and *The Little Review* from 1918 until he left Zurich during the Winter of 1919. Joyce wrote John Rodker from Paris on September 29 and November 10, 1920, asking for all copies to date of *The Little Review* containing the serialized *Ulysses* as replacements for the numbers that had been lost in the move from Trieste (*Letters III* 23, 29). Upon leaving Paris in late 1940, Joyce possessed all numbers from March 1918 to September-December 1920, ending with episode 14 of *Ulysses* (Gheerbrant no. 260). At that time he also had the February 2, 1914 to September 1, 1915 numbers of *The Egoist*, which contained twenty-five installments of the *Portrait* with several interruptions (Gheerbrant no. 213). From his letters and the biographies, we know that Joyce also possessed the January 15, 1914;³¹ March 1, 1916;³² April 1916;³³ and March,³⁴ April,³⁵ May,³⁶ and June³⁷ 1917 numbers of *The Egoist*. However, from various comments in his letters it is also evident that he received the issues from Winter through Fall of 1918 that advertised the impending serialization of *Ulysses*, as well as the 1919 numbers that serialized it.

From Winter 1918 through the end of 1919, both *The Egoist* and *The Little Review* exhibit an increasing editorial interest in new ideas on space and time as they pit the individual against traditional social institutions, state and religious power, and even censorship. In fact, the relativity theories become an essential component of *The Egoist*'s philosophical orientation nearly

³¹ *Letters II* 395, *Letters III* 32, Ellmann 400.

³² *Letters II* 377.

³³ *Letters II* 377.

³⁴ Ellmann 414.

³⁵ *Letters I* 102.

³⁶ *Letters I* 103.

³⁷ *Letters I* 103.

two years before Eddington's address, which probably makes it the first English literary magazine to discuss Einstein. From March 1918 to the magazine's closure in December 1919, Dora Marsden's leading essay series "The Science of Signs" connects relativity with the humanistic anxieties about civilization and philosophy that interest Joyce. Indeed, Marsden's injection of relativity influenced *The Egoist* to side against Newton as a static cultural force, later exemplified in T. S. Eliot's call for the public "to upset its reliance upon Shakespeare, Nelson, Wellington, and Sir Isaac Newton" ("Observations" 69). While that kind of argument recalls the static forces against which the individuals contend in "Wandering Rocks," other pieces in both magazines explore alternative relationships in space and time as a means of finding a more liberated modernity.

Thaine Stearns has shown that though Joyce and Marsden never met, they carried out an indirect conversation in print, responding to each other's writings and referring to each other in letters to Harriet Shaw Weaver and Sylvia Beach. Joyce read with interest Marsden's early essays in *The Egoist* and even incorporated some of her ideas into parts of *Ulysses*. Lidderdale and Nicholson indicate that the first three episodes of *Ulysses* arrived as typescripts at the *Egoist* offices in late February of 1918 (146). On April 10, 1918, Marsden wrote to Harriet Shaw Weaver criticizing the punctuation of the first sentence of "Proteus":

I have just re-read episode III of "Ulysses." My dear editor go down on your knees & thank your stars for possessing *one* writer of metaphysics who is CLEAR! That's *ME!!* Joyce is... my word! He's appalling! (quoted in Lidderdale and Nicholson 147, n. 475)

Stearns suggests that Marsden subsequently began responding to the first three episodes of *Ulysses* in her "Science of Signs" column for May 1918. However, it is more likely that the first of her published responses actually came in March 1918, when her series began an increasing

emphasis on astronomy and mechanics. She was clearly versed in original science,³⁸ which would have connected well with Stephen Dedalus' ruminations on the metaphysics of space and time in "Proteus."

Marsden's column in the March 1918 number of *The Egoist*, titled "The Constitution of the World and the Character of our Scientific Knowledge," is interesting for the way it

38 In the material that follows, Marsden's discussion of Einsteinian mechanics before it had been popularized constitutes strong evidence that she was well acquainted with original scientific literature. The most likely source was her former mentor at the University of Manchester, Samuel Alexander, a metaphysician and mathematician very knowledgeable in science. Later, in 1920, he published *Space, Time, and Deity*, a theory of metaphysics that takes into account the relativity theories after they were expounded in Eddington's address. Dora kept up a correspondence with Alexander for much of her life, and he later read and provided feedback on a draft of *The Definition of the Godhead*, though more research into her papers is needed to establish the extent and timing of her knowledge. Among her papers for *The Egoist* at Princeton University is a letter (Box 4, folder 4A) that suggests not only a continual correspondence with Alexander during the war, but the potentially revolutionary impact of certain kinds of science.

"Dalton Hall,
Victoria Park,
Manchester.

9/11/16.

My dear Margaret,

Now that I have got settled down—more or less—in Manchester & have a little leisure for reading & study, I should be so grateful if you would let me have some more copies of the "Egoist." I am very anxious to get on with those articles on "Lingual Psychology" by Dora Marsden which I had just begun when an unkind Fate packed up my caravan for me & drove me forth an Ishmael to emulate the actions of a mutual friend of ours, to go to & fro in the world, & wander up & down in it! But, to ascend from the ridiculous to the sublime, I think the articles in question are great, although my knowledge of them is not sufficiently great to make criticism very valuable as yet. But the little I have read interested me immensely. I have always had the fear that to wander in the Elysian fields with Locke & Berkeley, with Kant & Leibnitz & all the other Immortals was like to prove after all but a weary chain of interlocked circles, whilst I also cherish the fear that many psychologists—not least myself (!)—are in danger of becoming as "scientific" as the rest of the wise fools of this utilitarian age. But "Lingual Psychology" seems to me likely to prove a brilliant connecting link between many hitherto isolated conceptions; anyhow, I'd be grateful for the opportunity of further acquaintance with the articles, so trot 'em along! I want to shew them to Graham too; we've had many a "scrap" over Philosophy & Psychology, & I know he'd be interested to see that something good can come out of Nazareth after all! I wonder if Prof. Alexander has seen them—I must ask him what he thinks about the daring way in which she "tells off" certain reverend gentlemen!

Yours,
Burly.
_____ [line slanting up to the right]"

It is not yet known who Margaret or Burly were, but the letter refers to John William Graham, a mathematician and principle of Dalton Hall at Owens College before its incorporation into the University of Manchester. At

foregrounds chronology as the primary object of all scientific inquiry. Her description of science as being essentially concerned with the nature of events tacitly identifies it with the specialized branch of mechanics, hinting at some of the perceived uncertainties that characterize contemporary physics.

The task of science is to issue, under symbolic forms, authenticated classifications of the order of succession obtaining at any given stage in the flow of events in the external world. The modern scientist conceives the order of the external world under the vast tide of *groups of events* constantly ebbing and flowing, and revealing in addition unceasing transmutations among the individual groups which constitute the tide. He notes, however, that the *order or sequence* of these transmutations, multiple as the latter are, remains in the supremest degree constant. (33, Marsden's emphases)

Several aspects of this passage are striking. The anxiety over the multiplicity and “unceasing transmutations” of event-groups is not convincingly concealed by the assertion that their order remains absolutely constant. This is characteristic of the (mistaken) response that many writers would first have upon popularizing relativity at the end of 1919, though there is as yet no direct mention of it here. In addition, the insistence upon the inherent stability of sequence in individual event-groups probably arises from Marsden's long-standing arguments about the inviolable integrity of the self. She thereby extends the magazine's emphasis on pure individualism to the realm of sciences and the physical universe. This humanized picture of the universe seems like the planetary motions of the characters in “Wandering Rocks” and the manner in which they constitute multiple groups of events that transmute but ultimately remain stable. Finally, the tide metaphor used to illustrate her conception of the nature of events, with its constant ebbing and flowing, could have a source Stephen Dedalus'

the very least, the letter indicates that Alexander kept up with his former pupil's efforts. During the mid-1920s, when Marsden was working on *The Definition of the Godhead*, she asked Harriet Shaw Weaver to acquire original scientific materials on chemistry, electricity, and other physical disciplines. The exchange sparked Weaver's own personal interest in space-time, which for a time was to be put to fruition as an appendix to one of Dora's later book projects, though it was never published.

metaphysical ruminations on the strand in “Proteus,” which Marsden received several weeks prior to publishing this installment.

The likelihood that “Proteus” catalyzed Marsden's turn toward mechanics over the next several issues becomes more convincing if we look at the rhetoric she employs in a later passage about science and metaphysics. She states that modern scientists have exceeded their traditional boundaries by asking humanistic questions, “to render of external events their *reason* and their *why*” (34, Marsden's emphases).

These interpretations represent guesses based for the most part upon a wide survey of the order of the world's changes and constitute an endeavour to so “read back” certain outstanding but partial characteristics of events: those, for instance, of space, time, substance, and the like: so as to form a theory of the nature of the universe as a whole. It is these scientific “interpretations” so based which form the groundwork of our modern conceptions of the world and the universe.
(34)

The notion of interpretively “reading back” the meaning of events onto the physical universe is like the activity of philosophy (and novel writing). More to the point, in comparing the universe with the tide in the earlier passage on page 33, and in likening observing to reading in the present passage, Marsden uses the same vocabulary that Stephen does in “Proteus” to meditate on space, time, and metaphysics.

Ineluctable modality of the visible: at least that if no more, thought through my eyes. Signatures of all things I am here to read, seaspawn and seawrack, the nearing tide, that rusty boot. Snotgreen, bluesilver, rust: coloured signs. Limits of the diaphane. But he adds: in bodies. Then he was aware of them bodies before of them coloured. How? By knocking his scone against them, sure. (U 3.1-7)

Shortly after this passage, Stephen ruminates on the sense of hearing as *nacheinander*, perception in time or “one after the other,” and on vision as *nebeneinander*, perception in space or “one next to the other” (U 3.14-19). Later, hearing is also an indicator of space, where Stephen perceives that “[t]he dog's bark ran towards him, stopped, ran back” (U 3.310). Gifford and Seidman tell us that the sources for these philosophical ruminations are Berkeley's essay on vision (one

of Marsden's favorites, about which she frequently wrote), Samuel Johnson's refutation of it, and Lessing's *Lacoön* (Gifford and Seidman 44, 45). Wim Van Mierlo has also argued that Otto Weininger's ideas on ethics, space and time may be a source for this passage. Thus, the metaphysical lineage of knowledge through sense perception is brought into play here by Stephen as he attempts unsuccessfully to separate time from space in perception, ending up with an ineluctably four-dimensional metaphysics (time and space together). Marsden's view was the same. And if we consider the likelihood that Joyce read her essay in March 1918 or later, then the technique of "Wandering Rocks" can be understood as an extension of the perceptual experiments in "Proteus" occurring in dialogue with Marsden.

The Little Review issue of the same month, which was the first to serialize *Ulysses* with the "Telemachus" episode, features several items that deal with astronomy, space and time. Jessie Dismorr's "Matinee" is an iconoclastic poetic prose piece in which the narrator considers how "[herself] and the universe are two entities" (31).

The secret of my success is a knowledge of the limitedness of time.
Economy is scientific: I understand the best outlay of intention.
Within this crazy shell, an efficient machinery mints satisfactions.
...
The static cannot claim my approval. I live in the act of departure.
Eternity is for those who can dispose of an amplitude of time.
Pattern is enough. I pray you, do not mention the soul.
Give me detail and the ardent ceremonial of commonplaces that means nothing.
Oh, the ennui of inconceivable space! My travelling spirit will taste too soon of emptiness.
I thrill to the microscope. I plunder the close-packed cells and burrows of life. (31)

The perspective performs some of the same operations that Budgen identified in "Wandering Rocks," ranging from close-up to birds-eye view, from cosmic to microscopic, and various other angles. More importantly, the narrator paints herself as an interplanetary wanderer who maximizes the limitations of time and space, with a disposition that is overtly scientific yet

opposed to stasis and material determinism. Dismorr's piece is immediately followed by Ezra Pound's "The Classics 'Escape'," which deals with state power and censorship, two primary concerns of "Wandering Rocks." Then, late in the issue, the Reader Critic section features an odd item titled "Astronomy," by X., which quotes an announcement in *The Evening Standard* interspersed with cheeky commentary about the erection of a telescope on Mount Wilson that will solve some of the mysteries of the universe. Among its wonders, the new telescope will be able:

“(b) To bring no fewer than 100,000,000 new suns into the observer's ken.”

On s'encanaille.

“(c) To advance materially the solution of the mystery of the origin of the universe by determining still further the nature of the gassy nebluae [sic], which science is generally agreed, are unborn world—suns and planets visibly in the making”

They will doubtless tie the Pleiades in a bow-knot and loose the bands of Orion. (59)

The author's final commentary laments, “O world, thou Socratic star, the gods and fairies have left thee” (59). In both the Dismorr and X. pieces there is a theme of the individual against the static forces of the universe, with a mixed attitude that is both wary of demystifying the universe by science and energized by scientific marvel at it. As well, the Greek connection in the final comment would not have been lost on Joyce. The conjunction of these three items makes sense if we consider that “Wandering Rocks” pits the citizens as individuals against the mechanical forces of state and religion (they fail to salute properly and read things that both would disapprove of), as well as the physical universe. These pieces establish a discourse not only within *The Little Review* but also with Marsden's article this month in *The Egoist*. Thus, there is editorial interest in the conjunction of these topics in both magazines, perhaps because they share Pound and other contributors in common.

In the April 1918 number of *The Egoist*, several pieces make even more overt connections

between humanistic concerns and astronomy, including what is probably the first reference (albeit an indirect one) to Einstein's theories in an English literary magazine. Marsden's essay, "Two Rival Formulas," makes the case for the centrality of astronomy in the history of science and European thought, emphasizing a continuity between ancient and modern astronomers. In a striking paragraph later in the essay, she proposes the new uncertainties of science as an opportunity to reinvent philosophy, beginning her lifelong argument that science should essentially be the handmaiden of philosophic inquiry.

So the centuries have rolled on and science and philosophy have pursued their increasingly divergent ways, with the latter feebly endeavouring to exert an opposing authority. But now it seems a time has come when a strange new doubt has overtaken science. Thanks to its own unceasing endeavours, out of its own works have sprung effects which strip its established conceptions bare of their assurance. Those very conceptions of time and space upon which Newton founded modern physics find themselves called in question, and in spite of the discounting by those qualified to judge of the effects which such a condition of affairs must have upon the scientific outlook, it is certain that these effects must be too great to be at present even conceivable. (51)

In citing the upending of the foundational, Newtonian conceptions of time and space, Marsden is referring to Einstein's special theory of relativity. She clearly recognizes that the theory's full ramifications within the discipline of physics are not yet known, which is consistent with the field's specialists. However, she will also connect the known ramifications of the relativity theories, and therefore of astronomy, to the need for a total revaluation (*à la* Nietzsche) of all human values. Hence, the physical universe and its scientific investigation become critical components of humanistic inquiry. One cannot overemphasize the extent to which the new physics becomes drafted into the cause of a larger program of modernist revaluation in this magazine devoted to the individualist philosophy of Nietzsche.

Indeed, two paragraphs later Marsden makes the case for a science-driven revaluation of values even more explicitly, in a way that will sound much like the press coverage of Eddington's

address more than a year and a half hence. The epigraph of this article bears repeating:

The bases of our physics seemed to have been put in permanently and for all time. But these bases dissolve! The hour accordingly has struck when our conceptions of physics must necessarily be overhauled. And not only these of physics. There must also ensue a reissuing of all the fundamental values. The entire question of knowledge, truth, and reality must come up for reassessment. Obviously, therefore, a new opportunity has been born for philosophy, for if there is a theory of knowledge which can support itself the effective time for its affirmation is now when all that dead weight of preconception, so overwhelming in Berkeley's time, is relieved by a transmuting sense of instability and self-mistrust appearing in those preconceptions themselves. (51)

What she regards as the new uncertainties of science, “a transmuting sense of instability and self-mistrust,” seem to her a liberating opportunity for a new epistemology and metaphysics. The rhetoric employed in this segment continues the previous installment's response to “Proteus” and its Berkeleyan ruminations. For the next twenty months her essays will directly address the question of how new scientific uncertainties affect notions of reality, truth, knowledge and the role of language. These explorations, overtly grounded in new developments in astronomy and physics (specifically mechanics), perform the same operations Joyce will execute in the content and structure of “Wandering Rocks,” namely a concentrated focus on the nature of events.

In addition to Marsden's references to the Einsteinian revolution in physics, the April 1918 number features some content that establishes a discourse about the science of space and time in literature. Marianne Moore's poem “Black Earth,” immediately following Marsden's essay, ends with some gorgeous imagery comparing the majesty of an elephant to that of time, matter, and electricity (55). The poem is in turn juxtaposed with May Sinclair's study of Dorothy Richardson's novels, which foregrounds the representation of time, space, and inner experience in novel form. The essay reviews *Pointed Roofs*, *Backwater*, and *Honeycomb* for their treatment of time and reality through the use of stream-of-consciousness narrative and the

abandoning of generic novel form. She ultimately compares Richardson's techniques to Joyce: "Miss Richardson has not plunged deeper than Mr. James Joyce in his *Portrait of the Artist as a Young Man*" (57).

They say that they have no beginning and no middle and no end, and that to have form a novel must have an end and a beginning and a middle. We have come to words that in more primitive times would have been blows on this subject. There is a certain plausibility in what they say, but it depends on what constitutes a beginning and a middle and an end. In this series there is no drama, no situation, no set scene. Nothing happens. It is just life going on and on. It is Miriam Henderson's stream of consciousness going on and on. And in neither is there any grossly discernible beginning or middle or end.

In identifying herself with this life, which is Miriam's stream of consciousness, Miss Richardson produces her effect of being the first, of getting closer to reality than any of our novelists who are trying so desperately to get close. No attitude or gesture of her own is allowed to come between her and her effect. Whatever her sources and her raw material, she is concerned and we ought to be concerned solely with the finished result, the work of art. (58)

Sinclair's focus on the stream of consciousness as getting close to actual time, which in reality is an undifferentiated stream, highlights narrative as an arbitrary demarcation. Richardson's technical experiments remove conventional markers, thereby arriving at a closer version of reality. Though the technique is praised for being new, the novel is still regarded as the primary genre of realism and in that sense continues much of the pre-war discourse in *The Egoist* that considers it an essentially scientific medium. Obviously, Joyce was making his own headway with the stream of consciousness technique, which as Sinclair indicates inherently questions the nature of events. But "Wandering Rocks" takes that questioning even further by presenting many beginnings, middles, and ends, sometimes multiple and varying iterations of the same ones. Hence, the close arrangement of Marsden, Moore and Sinclair shows a deliberate editorial focus on philosophical questions of time and space, highlighting the different manners in which various genres and disciplines address them.

Even more interesting is that Sinclair's piece on Richardson appeared in *The Little Review* under the same title and in the same month. The version published in the American magazine is

longer and more iconoclastic in tone, while its analyses are more explicit about realism, idealism and the formerly hard distinction between objectivity and subjectivity in literature. More importantly, it is more detailed, makes more use of examples, and the section on event and order is far more considered.

The moments of Miriam's consciousness pass one by one, or overlapping, moments tense with vibration, moments drawn out fine, almost to snapping point. On one page Miss Richardson seems to be accounting for every minute of Miriam's time. On another she passes over events that might be considered decisive with the merest slur of reference. She is not concerned with the strict order of events in time. (7)

As an example, Sinclair draws on the opening of chapter three in *Honeycomb* that details Miriam's piano practice, stating that

if you want to know on what day she is practising you have to read on and back again. It doesn't matter. It is Miriam's consciousness that is going backwards and forwards in time. The time it goes in is unimportant. (7-8)

In this version Sinclair addresses the overlapping or interlacing of time, in other words of non-seriality, in addition to the seriality of the stream of consciousness. This heterochronicity, which is not referred to in the *Egoist* version, is actually closer to Einstein's special theory, though most likely does not derive from it. Regardless, the overlapping technique requires the reader to press ahead and then return in order to figure out the chronology of Miriam's piano practice, which is a trait it holds in common with the intrusion technique of "Wandering Rocks."

Other pieces in this number of *The Little Review* also explore the overlapping of time in urban space with astronomic overtones. An article by Ezra Pound titled "Reflexions" provides a quote from Jules Romains about the individual vs. the state in social and city life. While that conflict constitutes the core theme of "Wandering Rocks," what is more interesting is that Romains compares the city inhabitants to astronomic bodies, advocating the scientific

observation of social connections for a new humanistic appreciation. Such observations “uphold the laws of a science which struggles manfully to be scientific” (28). And once we realize that fact, then “we must know the groups that englobe us, not by observation from without, but by an organic consciousness” (28). The characters of “Wandering Rocks” are similarly “englobed” in groups by the parallaxic observations of the narrator and the intrusion technique, which makes connections based on a scientific model to create a more whole and unified collation of the social and individual orders. Thus, Pound's piece continues the discourse of the individual in the city, with the social and interpersonal connections arrayed in terms of astronomic bodies that began in the March 1918 number.

Later in this same issue, Ben Hecht's³⁹ prose-poem, “Fragments,” makes a powerful connection between the spirit of the modern city and the astronomic universe that is similar to Pound's excerpt from *Romans*. It also continues the theme of overlapping time from Sinclair's essay. Hecht's piece could almost certainly be a source for “Wandering Rocks,” as Joyce would have seen it beginning on the same page where the installment of “Nestor” ends. “Fragments” is a vivid account of the motions of city life, the “fragments of the monstrous multiple” “about which there is some weird phrase which has never been born” (48, 46).

There is something about the whole shouting, sweeping interlacing arrangement of eyes and masonry-lettered store windows and moving feet which accompanies me like an unborn dream.
The man walking here. The woman walking there. The crowd.
The old horse and the cab which rushes by and carries away the oval-tinted face.
They become a part of my thought.
Multiplied by a million they shift and move within my brain, the simple and insufferable parts of chaos. (46)

39 Hecht was an American novelist and short story writer, journalist, and award-winning screenwriter originally based in Chicago. He was sent to Berlin at the end of WWI to cover the revolutionary events in Germany (1918-1919). He knew Margaret Anderson personally and contributed to *The Little Review* as well as *The Smart Set*, which Joyce also knew. Murry Beja informed me during the 2009 North American James Joyce Conference in Buffalo that Hecht wrote the 1927 film *Underworld* in which one of the chief villains was the gangster “Buck” Mulligan, played by Fred Kohler.

While this passage and others like it capture the multiplicitous, “interlacing arrangement” of the city in a manner similar to “Wandering Rocks,” the latter portion of the piece portrays the oncoming of night, “[t]he Madonna of the spaces” (48).

What is the eternal unknown with its bogeymen compared to this vaster and more perfect physical oblivion?
The monstrous detachment of each tiny thing about me from myself is greater than the spaces of the stars. (48)

For the narrator of Hecht's piece, the “multiple mechanism of this unknown” (48) has allurements that “challenge more than the mystery of sun rising or stars shining” (49). The sensibility of urban living described here is one of physical detachment in which the subject feels infinitesimal and insignificant as if in relation to the cosmos. The hostile environment of the city, also a theme of “Wandering Rocks,” is compared metaphorically to that of the cosmos. Thus, the April 1918 number of *The Little Review* arranges a variety of materials from Sinclair, Pound and Hecht that explore the experience of modernity by blending the city and astronomy with experimental uses of space and time. In that way, perhaps through the Pound connection, *The Egoist* is invested in the same connections during that month.

“Fragments” is followed in the May 1918 *Little Review* with another city piece by Hecht, titled “Nocturne,” which again immediately follows Joyce's installment (this month, “Proteus”). It continues the notion of the city as hostile environment and makes many astronomic comparisons.

On this night I walked with my thoughts full of the grimaces of the little greedy half-dead become now no [sic] preposterously silent. Through the little empty labyrinths of stone the centuries sighed their desolation. Yellow and lonely advertisements burned here and there above invisible roofs, and I observed that the buildings which were so important by day, the great perforated [sic] rectangles of stone, the streets that fulfilled the mighty functions of traffic, lay under the stars like some gloomy, useless [sic] toyland. The city was an anachronism in the night. Silence with its dark and enigmatic face stared at the sky. The moon made inanimate blue fire-flies of the windows. (46)

Several aspects of this passage are consistent with “Wandering Rocks,” particularly the emphasis on the labyrinth, which is one of the keywords in Joyce's schema, and the geometric rendering of its topography. The notion of the city as an anachronistic field is exactly what Joyce achieves through the narrative technique in “Wandering Rocks,” though his rendering of Dublin is perhaps less alienated than Hecht's scene. Still, Joyce and Hecht both use astronomy to evoke the physicality of being, using astronomic metaphor to portray the vanity of civilization as emblemized in the city. This desolate view becomes more pronounced in both magazines as the end of the war nears.

The May 1918 *Egoist* introduces a new association of science with both literature and criticism, which will last until the magazine's closure. A column by T. S. Apterix (actually T. S. Eliot) called “Observations” equates the crises of Western Civilization with “journalese,” which “cannot either in allegories or in direct speech think clearly” (69). Picking up Marsden's philosophical arguments, his solution states that “[w]hat we want is to disturb and alarm the public: to upset its reliance upon Shakespeare, Nelson, Wellington, and Sir Isaac Newton; to point out that at any moment the relation of a modern Englishman to Shakespeare may be discovered to be that of a modern Greek to Æschylus” (69). It is significant that Eliot blasts Newton as one of the stagnating influences of Western Civilization, as it echoes the central conflict of “Wandering Rocks” and bolsters the magazine's preference for new physical theories. Eliot goes further in the June-July number, where he insists that “[a] poet like a scientist, is contributing toward the organic development of culture,” and that he likewise must “know the work of his predecessors or of men writing in other languages” (“Contemporanea” 84). Eliot's pattern of comparing literature and criticism to science culminates—with the magazine's

culmination—in the famous essay “Tradition and the Individual Talent.” Many of Eliot's pieces in *The Egoist* develop the notion that literature, science, and civilization are all in need of continual renovation for the avoidance of stasis and stagnation. The continual motion and Greek basis of “Wandering Rocks” can be seen to answer that need.

Other selections from Marsden's essays in the June-July through November-December issues show an overall awareness of Einsteinian mechanics, which she applies to her arguments about “salving” civilization by making a new one along the lines of individualism. In the August number she claims that “the physicist is revealing all forms, those of mass equally with those of free forces,” citing the “mass of evidence recently forthcoming relative to the disintegration and constitution of the atom” (“Organic Determination” 91). The notion that a minuscule amount of matter contains a massive amount of energy was put forth by Einstein in the now-famous equation $E=mc^2$. In the same essay she also argues against simultaneity, especially in astronomic events, which is another tenet of Einstein's special theory (92). She additionally reminds her readers that “the generalizing mind does not live and work in a featureless vacuum but in a world presenting geometrical forms and motor-forces of very pronouncedly individualised character” (93). This statement continues her characterization of the new-physical universe as marked by individualized attributes, an element in common with her view of humanity and something that is foregrounded in “Wandering Rocks.” In the September 1918 number she refers to several aspects relating to the “baffling effects of space” in relativity, including the denial of a fourth dimension (which she seems to confuse as a fourth dimension of space rather than of time, as Einstein held) (“Space and Substance” 103); positing that there is no ether (the absence of an ether was part of the hypothetical framework

of Einstein's theory) (104); and the notion of gravity as the “warp of the universe athwart which space must interweave itself according as it can” (104). Though Marsden was clearly enthralled by the new physics, she sometimes found the immensity of the universe and its philosophical possibilities to be overwhelming, “to render the novice almost giddy and faint” (“Organic Determination” 91).

All of this sometimes led her, like other contributors to these two magazines, to the feeling that humanity is insignificant in light of the new astronomic understanding.

As an instance of what is meant there are the facts of astronomy. It is not too much to say that the human mind is literally bullied by the wealth of astronomical phenomena. When men read of some new telescope which is able to bring at a stroke a hundred million new suns into their ken,⁴⁰ although this instrument is man-made, they remain unmistakably depressed. What is its meaning? It is the sense of the existing powerlessness of the spatial power to bring men into anything approaching intimate connexion and contact with the new substantial elements. Man's universe has so swiftly expanded that he is overwhelmed with his impotence to overrun and reduce it. The intellect is no longer able to hold an even rein over the necks of the forces it commands. The result is strain and discouragement. (“Space and Substance” 105)

Her antidote is the symbol, which has the ability to connect the human mind not only with reality, but with the past stores of time that are no longer present. By the November-December issue, just when Joyce would likely have been making his final collations for “Wandering Rocks,” Marsden was able to synthesize all of her foregoing thoughts on the new physics and its ramifications into “the salvaging power of signs,” with which “such sciences as mathematics, chemistry, and physics... [revive] with transforming effect the details of a story already once told” (“Truth” 127, Marsden's ellipsis). That science blends the ancient with the modern to make anew a story “already once told” is precisely the modernist program of *Ulysses* and other pieces in these two magazines. The technique of “Wandering Rocks” makes that interlacing and blending of times into a more literal interpretation of the novel's parallel structure in the

40 Apparently a reference to the piece “Astronomy” by X. in the March 1918 *Little Review*. See above.

mythic method. Einstein's physics, therefore, with its multiple limited perspectives and flexible time, was a primary source for Marsden and Joyce's metaphysics as they sought a renewed outlet for liberty. "Wandering Rocks" employs the same principles as Joyce sought a new direction both for *Ulysses* and humanity.

By the time "Wandering Rocks" emerges in the June and July 1919 numbers of *The Little Review*, it participates fully in the discourse of urban physics, astronomic metaphor, and avant-garde politics of modernist magazine culture. Joyce's exploration of the nature of events almost certainly derives from the pieces he found there that question the limits and constitution of the fictional event in association with science. While this section has taken pains to show the presence of Einsteinian mechanics in "Wandering Rocks," it must be asked just what that means. It remains doubtful that Joyce would have incorporated aspects of the relativity theories with the knowledge that Einstein was their author. Rather, relativity seems to have trickled, via Dora Marsden, into the English-language magazines that Joyce read as they serialized *Ulysses*, and from there entered his work on later episodes as he borrowed or unconsciously absorbed them. New information, including undiscovered *avant-texte* of "Wandering Rocks," might yet arise to shed light on Joyce's relationship with physics.

"Ithaca" and Post-Euclidean Geometry after Einstein's Public Entrée

About two years after completing the fair copy draft of "Wandering Rocks," Joyce began writing "Ithaca," heightening many of the same thematic explorations in a style that parodies scientific language. Like "Wandering Rocks," "Ithaca" treats the characters as cosmic wanderers finding their way in a hostile environment. Joyce gave Stuart Gilbert a schema that lists science

as the art of “Ithaca” and comets as its symbol. However, a first-time reader will not need any guidance to apprehend the episode's obsession with astronomy, mathematics, and geometry. The use of science in “Ithaca” is intended to expose the relationships between the characters and themes before the final synthesizing gesture of “Penelope.” At the end of February 1921, Joyce wrote to Budgen that he was “writing *Ithaca* in the form of a mathematical catechism. All events are resolved into their cosmic physical, psychical etc. equivalents” (*Letters* I 159). He claims further that “not only will the reader know everything and know it in the baldest coldest way, but Bloom and Stephen thereby become heavenly bodies, wanderers like the stars at which the [sic] gaze” (*Letters* I 159-60). He also says that “The last word (human, all too human) is left to Penelope. This is the indispensable countersign to Bloom's passport to eternity” (*Letters* I 160). In a letter to Claud W. Sykes in Spring 1921, Joyce writes that he is “[s]truggling with the aridities of Ithaca—a mathematico-astronomico-physico-mechanico-geometrico-chemico sublimation of Bloom and Stephen (devil take 'em both) to prepare for the final amplitudinously curvilinear episode *Penelope*” (*Letters* I 164). On 6 December 1921, Joyce wrote to Harriet Shaw Weaver that the “Ithaca” episode “should be read by some person who is a physicist, mathematician and astronomer and a number of other things” (*Letters* I 178). The overly precise narrative is a parody of quantitative thought, yet, as many critics note, the aim is to expose the relationships between the novel's major characters and themes before a backdrop of cosmic eternity. In that way, the episode ties together the universal and humanistic elements of the novel before the “all too human” and “amplitudinously curvilinear” finale of “Penelope.”

By the time Joyce began work on “Ithaca” in the Spring of 1921, newspaper and magazine articles popularizing Einstein had pervaded both the mainstream and avant-garde

print cultures of Paris and London for a year and half. Indeed, during the marketing campaign ahead of the initial book publication, Joyce began directing critical reception in a way that compared him favorably with Einstein. Joyce consulted with Valéry Larbaud throughout the Fall of 1921 on the content of his 7 December talk on *Ulysses* at the Maison des Amis des livres, which was later published in the April 1922 number of *La Nouvelle Revue Française*:

No critic has yet engaged with [Joyce's] body of works, and it is with much trouble that the most literate of the English and American public begin to talk about him; but it is not an exaggeration to say that, among people in the profession, his name is as known and his works as much discussed as may be, among scientists, the names and the theories of Freud or Einstein. (385)

[Aucun critique ne s'est encore occupé de son œuvre et c'est à peine si la partie la plus lettrée du public anglais et américain commence à entendre parler de lui ; mais il n'y a pas d'exagération à dire que, parmi les gens du métier, son nom est aussi connu et ses ouvrages aussi discutés que peuvent l'être, parmi les scientifiques, les noms et les théories de Freud ou de Einstein. (385)]

Whether he asked Larbaud to say this or not, Joyce certainly would have approved it before the speech was given. The comparison of Joyce with Einstein and Freud is made on the perceived cultural authority of science, used here to make a claim on the importance of Joyce's work. While Larbaud's speech claimed for Joyce the status and reputation equivalent of a leading scientist, others were making a more substantive comparison between *Ulysses* and contemporary physics.

After *Ulysses* was published, Joyce in early 1922 urged T. S. Eliot, through Harriet Shaw Weaver, to take up the critical discussion of Homeric parallels that first began with Larbaud's speech (Ellmann 527). Eliot's version of the parallel relationship, which he earlier called the “two-plane method” (to Joyce's great approval), became fully realized in his famous essay in *The Dial* of November 1923, “Ulysses, Order, and Myth.” In response to attacks by Richard Aldington and other critics who complain that *Ulysses* is undisciplined and chaotic, Eliot

counters that *Ulysses* is classical in the sense of doing the best that it can with the materials of its time and place. What that means, for Eliot, is that *Ulysses* abandons the novel form and narrative method in favor of the mythic method, which “manipulat[es] a continuous parallel between contemporaneity and antiquity” (“Ulysses” 177).

This notion of connecting different temporal locations within a continuum by means of a parallel relationship is a direct invocation of the frame of reference in Einstein's relativity: “Mr Joyce's parallel use of the Odyssey has... the importance of a scientific discovery” and, furthermore, writers who use this mythic method “will not be imitators, any more than the scientist who uses the discoveries of an Einstein in pursuing his own, independent, further investigations” (“Ulysses” 177). Thus, for Eliot and Joyce, classicism becomes a means of imposing a new, more whole and unified form not only upon a novel in relation to the literary tradition, but upon civilization in connection with history: “If [*Ulysses*] is not a novel, that is simply because the novel, instead of being a form, was simply the expression of an age which had not sufficiently lost all form to feel the need of something stricter” (177). Thus, Eliot's version of Joyce's parallel method—encouraged by Joyce—implicates Einstein in forming a stronger fusion of contemporaneity and antiquity throughout *Ulysses*. And while Joyce's work is equal in importance and innovation to Einstein's theories, the substance of the method “is a way of controlling, of ordering, of giving a shape and a significance to the immense panorama of futility and anarchy which is contemporary history” (177). Eliot thereby posits the classicism of Joyce's avant-garde novel as a salvific force, continuing the claims made by himself and Dora Marsden for the new science's role in the symbol during the waning days of *The Egoist*. These arguments continue trains of thought that began during the final stage of composition

for *Ulysses* and originated from Joyce himself.

Thus, the introduction of the concept of parallels in “Ithaca” takes on a more literal understanding of the novel's structural principal and is one part of a cadre of themes that together question the bases of science, literary realism and, by extension, the novel. As such, we can regard the geometrical underpinning of “Ithaca,” and therefore of *Ulysses* generally, in a post-Euclidean and Einsteinian light.

Many scholars point out that the science, math, and geometry contained in the “Ithaca” episode are squarely rooted in the tradition of Newton and Euclid.⁴¹ This is frequently a basis for claims that Joyce either had no knowledge or interest in newer theories, or that he was conservative in his implications of the use of science and math for his art. For example, when the interrogator asks what seem to be the “predominant qualities” of Stephen, the answer applies Newton's law of equal and opposite reactions in colliding bodies: “[c]onfidence in himself, an equal and opposite power of abandonment and recuperation” (U 55.252-254). While this answer refers to competing forces within the self, others refer to interpersonal relationships, as when the interrogator asks whether Bloom found “four separating forces between his temporary guest and him,” the answer being “[n]ame, age, race, creed” (U 55.402-403).

We would do well, however, to remember that “Ithaca” parodies the language of

41 Philip F. Herring, *Joyce's Notes and Early Drafts for Ulysses: Selections from the Buffalo Collection*, Charlottesville: UP of Virginia, 1977; A. Walton Litz, “Joyce's Notes for the Last Episodes of 'Ulysses,’” *Modern Fiction Studies* 4 (Spring 1958): 3-20; Michael Livingston, “Dividends and Divisors Ever Diminishing: Joyce's Use of Mathematics in 'Ithaca,’” *James Joyce Quarterly* 41.3 (Spring 2004): 441-454; Richard H. Madsen, “Joyce and the Building of Ithaca,” *English Literary History* 31.4 (December 1964): 443-459, and *The “Ithaca” Chapter of Joyce's “Ulysses,”* Ann Arbor: UMI Research Press, 1983; Patrick A. McCarthy, “Joyce's Unreliable Catechist: Mathematics and the Narration of 'Ithaca,’” *English Literary History* 51.3 (Autumn 1984): 605-618; Ray Mines and Reed Way Dasenbrock, “'Nought nowhere was never reached': Mathematics in *Ulysses*,” *James Joyce Quarterly* 35 (Fall 1997): 25-36; Joan Parisi Wilcox, “Joyce, Euclid, and 'Ithaca,’” *James Joyce Quarterly* 28 (Spring 1991): 643-49.

traditional science, math, and geometry, and therefore also the conceptual frameworks upon which those disciplines are built. In some sense, “Ithaca” aligns itself *against* Euclid and Newton, though with little positive presence of non-Euclidean or Einsteinian features it is difficult to articulate just how that is.

One way in which “Ithaca” undermines traditional scientific certainty and novelistic realism is through the introduction of erroneous facts and calculations. McCarthy and Livingston have taken pains to show that most errors are intentional, while others seem to have been introduced by Joyce's limited abilities with the subject matter. McCarthy indicates that one error “that might actually call for a little scientific knowledge, is contained in the description of the 'cold of interstellar space' as being 'thousands of degrees below freezing point or the absolute zero of Fahrenheit, Centigrade or Réaumur'” (607). Any textbook or reference that Joyce had consulted would have shown “that absolute zero in these systems is measured in hundreds, rather than thousands, of degrees below the freezing point of water” (McCarthy 607). Such an egregious error shows the human side of the overly precise and scientific discourse of the catechism. Likewise, Livingston examines Joyce's notesheets for “Ithaca,” which show serious attempts on his part to learn advanced algebra and calculus by working through a number of equations and axioms (448). While the many errors in the notesheets are due mainly to Joyce's limited ability to construe the concepts in mathematical terms, it is clear that he understood them sufficiently to conclude that the vast majority of the errors introduced into “Ithaca” are intentional.

For Joyce, the cold, hard facts of the catechism must be viewed with the same intelligent skepticism as stage directions or music or newspaper headlines. Readers are required to identify what is “real” and “true”—if they can—and the preponderance of errors in “Ithaca” succinctly illustrates the point. Whether or not all of the errors are intentional, many most

certainly are, and Joyce aims to show the faults of the indifferent analytical, scientific, and naturalistic approaches to knowledge. Basic errors of calculation reveal how such knowledge can be ultimately arrogant and vain because the calculations themselves are simply another narrative tool full of stylistic conventions; even mathematics, that universal language, is built on arbitrary propositions like Euclid's postulates. (Livingston 450)

Seen in this way, "Ithaca" seems to respond to the detachment, indifference, and impersonality espoused by T. S. Eliot in the waning days of *The Egoist*, showing that even questions of fact and science have limits, specifically limits inherent in humanity and in narrative. McCarthy goes on to repeat the idea that even science does not show reality outside that invoked by its own questions. The result is a leveling of science and art in the catechistic method, but what is the episode's position? Is the parody intended to suggest a more unified integration of scientific and humanistic principles, or is it aligned against science in favor of the humanistic?

Some recent scholars, like Wilcox, argue that one subtext of "Ithaca" is the succession of intellectual power and the new preference for plurality and interpretation, reflecting the contemporary change in authoritative models of science and math. These changes were discussed *ad nauseum* by Dora Marsden and a number of reader correspondents in *The Egoist*, as was shown above, so Joyce would have been quite familiar with the details of these developments. Though Wilcox does not examine Joyce's involvement in print culture, her arguments are bolstered by the discourse of scientific succession in *The Egoist* that was discussed in the previous section of this chapter.

The "Ithaca" episode of *Ulysses* foregrounds both the syntax of science and its abstract and creative processes. The "baldness" and "coldness" of the voice lends the air of scientific authority to the text, and this supposed objectivity provides the equation within which the poet/mathematician discovers the beautiful truth. Joyce articulates this duality by calling the episode a "mathematical catechism" (*Letters I* 159): the fusion of science/scientist with the divine/priest yokes Western culture's two greatest interpretational systems, systems that have both embraced and denied one another in complex ways throughout history. Furthermore, the tensions inherent in the question of authority for either system and the dual tension within science itself (is it a science or an art, and, perhaps more importantly, how can it make claims for authority yet necessarily proceed by questioning and even overthrowing authority via new

discoveries?) have affinities with the tensions among and within Joyce's characters, especially Stephen and Bloom, and between readers and the text. (643)

Though many scholars have broached the manner in which the catechism technique “yokes” science and religion, Wilcox is to my knowledge the only one to have referred to the paradigm shift in scientific and quantitative disciplines that preceded and continued into contemporaneity with *Ulysses*. Given that “Wandering Rocks” explores a similar yoking of governmental and religious authority, in relation to the individual citizens that fall under their purview, “Ithaca” seems to embody a more specific conflict of interpretational authority between the intellectual domains of religion and science, and within science itself.

The question of intellectual authority, and also the practice of adhering to a single authority within the field of geometry, has many historical parallels to the problems burgeoning in physics during the Nineteenth Century, and which became revolutionized later when Einstein overthrew Newton.

It was not until the nineteenth century that mathematicians who were trying to prove the fifth axiom made the theoretical and conceptual leap to accept these contradictions as valid. In other words, Euclid's fifth axiom does not have absolute universal relevance, for there are other possible geometries that have properties distinct from plane geometry but that are just as relevant for explaining physical space. The conceptual leap here is one of assigning authority. Once mathematicians gave up the notion that Euclid's was the only possible geometry, they were able to construct consistent axiomatic systems for many different geometries: non-Euclidian geometry was born. One of the major assumptions revised was that there could be only one line parallel to another line through a point. If one assumes no such parallel lines exist, one has elliptical geometry; if one assumes at least two such lines exist, one has hyperbolic geometry. The important lesson is that one cannot assume that a particular abstract mathematical system is the only one that describes “reality.” The lesson is one of plurality of interpretation. (Wilcox 644-645)

This exact question of authority and interpretation in geometry is addressed directly in the opening question of “Ithaca” about Stephen and Bloom walking in parallel but intersecting lines, the answer to which reproduces Euclid's fifth axiom almost exactly (Wilcox 645).⁴²

⁴² Euclid's fifth axiom of plane geometry states that “If a straight line falling on two straight lines makes the interior angles on the same side less than two right angles, then the two straight lines if extended will meet on that side of the straight line on which the angles are less than two right angles” (Wilcox 644). Euclid, and

Wilcox agrees that “Euclid, then, and the question of authority and interpretational systems that surround his place in mathematical history, surely become a subtext for this episode” (646). This conflict between authority and interpretation is also a central conflict in “Wandering Rocks,” where the characters do things of which neither the state nor religious authorities would approve, and where “elicit” books are read. Wandering, anarchic individualism and its astronomic overtones are blended with that process. Thus, both “Ithaca” and “Wandering Rocks” owe a similar debt to discourses in *The Egoist* and *The Little Review*.

Many commentators have pointed out that the scientific narrator of “Ithaca” opens the episode with a view of Bloom and Stephen walking in a not-so-parallel fashion.

* What parallel courses did Bloom and Stephen follow returning?

Starting united both at normal walking pace from Beresford place they followed in the order named Lower and Middle Gardiner streets and Mountjoy square, west: then, at reduced pace, each bearing left, Gardiner's place by an inadvertence as far as the farther corner of Temple street: then, at reduced pace with interruptions of halt, bearing right, Temple street, north, as far as Hardwicke place. Approaching, disparate, at relaxed walking pace they crossed both the circus before George's church diametrically, the chord in any circle being less than the arc which it subtends. (U 17:1-7)

The image of Bloom and Stephen's wavering walk toward 7 Eccles Street recalls an uncrossed entry in the first notesheets for “Ithaca”—“If Earth got drunk!” (Herring *Ulysses Notesheets* 483.61)—suggesting that their parallel paths were actually quite intertwined. This notion of intersecting parallel lines is a post-Euclidean idea, despite the Euclidean definition of the chord of a circle, and it raises the larger question of the nature of the Homeric parallel for *Ulysses*.

Michael Groden addresses the issue to an extent in *Ulysses in Progress*.

But Joyce's workshop gives us no help in assessing the various contradictory interpretations, such as those of Harry Levin, who sees the relationship as one of “parallels that never meet” and that “convert a realistic novel into a mock-epic,” and of Richard Ellmann, who describes one meaning of the parallel as “the ennoblement of the mock-heroic” and argues that “Bloom is

geometricians who followed throughout the ages, have been troubled by the fact that the fifth axiom is not logically deducible from the other axioms, and that it suggests properties of infinite lines that were not self-evident or observable from experience (Wilcox 644).

Ulysses in an important sense.” (201, Groden's emphasis)

To my mind, Ellmann's approach is more accurate in that it accounts for the synthetic nature of the symbolic structure of *Ulysses* and the role of metempsychosis within it. As is well known, the very title of *Ulysses* refers to the Roman reincarnation of the original Greek hero, cluing the reader in to the metempsychotic nature of the modern “man of many wiles.” But if we consider this aim of intertwining the ancient tradition with the modern in the light of the scientific and mathematical parody of “Ithaca,” then how do we understand the overuse of all those Newtonian and Euclidean expressions? Are the ancient and the modern meant to be separate parallel paths in an absolutist Newtonian-Euclidean universe, or are they significantly intertwined by a curvilinear literary space-time? What then is the significance of the parallel?

One treatment of quantitative thought using humanistic examples is Bertrand Russell's *Introduction to Mathematical Philosophy* (1919), a known source for Joyce's revisions of the late 1921 placards and proofs for “Ithaca.” The book popularizes the new mathematical and philosophical theories of Gottlob Frege, A. N. Whitehead, Ludwig Wittgenstein, and Georg Cantor. It is marketed toward a generally educated readership but actually presupposes an advanced knowledge of algebra and even some calculus. In that way, it is a far cry from Joyce's request to Budgen at the end of February 1921 to pick up “any ragged, dirty, smudged, torn, defiled, effaced, dogeared, coverless, undated, anonymous misprinted book on mathematics, or algebra or trig. or Eucl. from a cart for 1d or at most 2¼d tant mieux” (*Letters I* 160, Joyce's emphasis). While such a text was certainly a source for the first “Ithaca” notesheets (in Add. MS. 49975 at the British Museum), which was used to compose the fair copy draft and typescripts, it is still not known how or why Joyce came into possession of Russell's text

(Herring *Ulysses Notesheets* 415-89). The notes from Russell appear in V.A.2 at Buffalo (Herring *Notes and Early Drafts* 37-120).

No scholar has yet studied Russell's text for its relevance to *Ulysses*. Joyce took notes on all but five of its eighteen chapters, showing that he seriously studied most if not the entire book. The notes appear in V.A.2 at Buffalo, mostly on pp. 28-30, mixed with diverse material for "Ithaca,"

at times in nonsequential order, indicating that Joyce probably transferred them to the notebook from individual note cards or scraps of paper. Considering Joyce's background in mathematics, it is a tribute to Russell that Joyce was interested in his ideas on mathematics and philosophy, not just in the terminology, as was sometimes the case with such reading (Herring *Notes and Early Drafts* 49-50).

What we find there is a rich treatment of advanced mathematics and some post-Euclidean geometrical concepts illustrated by the themes of family relations, sexual life, succession, transmission, inheritance, and the relationship between antiquity and modernity. All of these are the terms that get reduced to their elemental relationships in "Ithaca." For example, Joyce's note, "O Greeks&Romans had not" (Herring *Notes and Early Drafts* 106), comes from the first chapter, on the series of natural numbers: "It is only at this high stage of civilisation that we could take this series as our starting-point.... As for 0, it is a very recent addition: the Greeks and Romans had no such digit" (Russell 3). That Joyce saw fit to move this notation to a notesheet, which contained a selection of earlier rough notes as candidates for inclusion in the novel, shows that he was interested in the succession of mathematical ideas since antiquity, and not just in their ability to provoke mere curiosity for the sake of the "Ithaca" parody. Other examples drawn from the classics include the relationships of Socrates and Xanthippe, as well as Caesar and Brutus.

Several notes that Joyce made from chapter two, on the definition of number, and

chapter seven, on rational, real, and complex numbers, amplify Bloom's relationships with his personal past as it pertains to his entrance to eternity. All of the notes are ultimately concerned not with number itself, but with the types of relations between terms that form the basis of both modern mathematics and logic. The first three notes,

G <I=I/I>⁴³ (105)

G <converse domain of relations> (106)

I-I monogamy (106)

derive from pages 15 and 16 of Russell, where we find this description of family relationships in the second chapter, which also explains the nature and purpose of relations in mathematical philosophy. I have underlined the phrases that Joyce annotated.

In actual fact, it is simpler logically to find out whether two collections have the same number of terms than it is to define what that number is. An illustration will make this clear. If there were no polygamy or polyandry anywhere in the world, it is clear that the number of husbands living at any moment would be exactly the same as the number of wives. We do not need a census to assure us of this, nor do we need to know what is the actual number of husbands and of wives. We know the number must be the same in both collections, because each husband has one wife and each wife has one husband. The relation of husband and wife is what is called "one-one."

A relation is said to be "one-one" when, if x has the relation in question to y, no other term x' has the same relation to y, and x does not have the same relation to any term y' other than y. When only the first of these two conditions is fulfilled, the relation is called "one-many"; when only the second is fulfilled, it is called "many-one." It should be observed that the number 1 is not used in these definitions.

In Christian countries, the relation of husband to wife is one-one; in Mahometan countries it is one-many; in Tibet it is many-one. The relation of father to son is one-many; that of son to father is many-one, but that of eldest son to father is one-one. If n is any number, the relation of n to n+1 is one-one; so is the relation of n to 2n or to 3n. When we are considering only positive numbers, the relation of n to n² is one-one; but when negative numbers are admitted, it becomes two-one, since n and -n have the same square. These instances should suffice to make clear the notions of one-one, one-many, and many-one relations, which play a great part in the principles of mathematics, not only in relation to the definition of numbers, but in many other connections.

Two classes are said to be "similar" when there is a one-one relation which correlates the terms of the one class each with one term of the other class, in the same manner in which the relation of marriage correlates husbands with wives. A few preliminary definitions will help

43 Herring's markup of Joyce's notes indicates the color and the areas that were highlighted. The capital letter preceding a selection of text between angle brackets indicates the color in which the span of text was highlighted. R is for red; B is for blue; G is for green. Thus, G <note abc> indicates that Joyce wrote "note abc" and then crossed it out in green when he incorporated it into the fair copy or a revision. Joyce crossed out notes when they were added to the text in order not to reuse them, though on occasion a note was used in multiple places, and others were used without being crossed out.

us to state this definition more precisely. The class of those terms that have a given relation to something or other is called the *domain* of that relation: thus fathers are the domain of the relation of father to child, husbands are the domain of the relation of husband to wife, wives are the domain of the relation of wife to husband, and husbands and wives together are the domain of the relation of marriage. The relation of wife to husband is called the *converse* of the relation of husband to wife. Similarly *less* is the converse of *greater*, *later* is the converse of *earlier*, and so on. Generally, the converse of a given relation is that relation which holds between *y* and *x* whenever the given relation holds between *x* and *y*. The converse domain of a relation is the domain of its converse: thus the class of wives is the converse domain of the relation of husband to wife. We may now state our definition of similarity as follows:--

One class is said to be "similar" to another when there is a one-one relation of which the one class is the domain, while the other is the converse domain. (15-16, Russell's italics)

At first glance, this passage would seem to underwrite the "Ithaca" episode's concern with the polyvalence of spousal relationships, notably Bloom's proposal for an alternative domestic arrangement in which Stephen would stay in the spare room and teach Molly Italian, bearing a suggestion that he might sleep with her (U 17.929-972). However, many of the notes deriving from this passage came from the third and fourth paragraphs and would seem to enhance the "Ithaca" episode's general emphasis on paternity relationships, such as Bloom's ties to his late father, his father's relationship to Bloom's grandfather, and with Bloom's relationship to his deceased son Rudy. But a close look at how Joyce used these notes must take into account other notes made from page 65.

The notes from page 65 were specifically used in an early passage of "Ithaca" that sets the tone for the episode's ultimate concern with human-cosmic relationships through the concept of infinity.

G <0=1/many>
 ∞ =many/one
 R <0=1/many, ∞ =many/1> B <other=1/1>
 G <sequence> (Herring *Notes and Early Drafts* 65)

Russell's passage continues the discussion of one-one, one-many, and many-one relationships that began with the discussion of families on page 15 above.

It will be seen that $0/n$ is always the same relation, whatever inductive number *n* may be; it is, in

short, the relation of 0 to any other inductive cardinal. We may call this the zero of rational numbers; it is not, of course, identical with the cardinal number 0. Conversely, the relation of $m/0$ is always the same, whatever inductive number m may be. There is not any inductive cardinal to correspond to $m/0$. We may call it "the infinity of rationals." It is an instance of the sort of infinite that is traditional in mathematics, and that is represented by " ∞ ." This is a totally different sort from the true Cantorian infinite, which we shall consider in our next chapter. The infinity of rationals does not demand, for its definition or use, any infinite classes or infinite integers. It is not, in actual fact, a very important notion, and we could dispense with it altogether if there were any object in doing so. The Cantorian infinite, on the other hand, is of the greatest and most fundamental importance; the understanding of it opens the way to whole new realms of mathematics and philosophy.

It will be observed that zero and infinity, alone among ratios, are not one-one. Zero is one-many, and infinity is many-one.

There is not any difficulty in defining *greater* and *less* among ratios (or fractions). (65, Russell's emphasis)

A salient thread in this passage is its identification of a traditional definition of infinity that must give way to the Cantorian. Russell's excitement that the newer, revolutionary definition "opens the way to whole new realms of mathematics and philosophy" recalls Dora Marsden's polemical essays about relativity and other mathematical theories in the waning days of *The Egoist*, and would not have been lost on Joyce.

When we turn, then, to the passage for which these notes from pages 15, 16, and 65 were used, we find Joyce working them into a description of the changes in Bloom's intra- and interpersonal relationships over time in an ontological context, all of which derive directly from Russell. The dates listed in the first question refer to the occasions on which Bloom discussed "the influence of gaslight or electric light on the growth of paraheliotropic trees... during nocturnal perambulations in the past" (U 17.44-47).

What reflection concerning the irregular sequence of dates 1884, 1885, 1886, 1888, 1892, 1893, 1904 did Bloom make before their arrival at their destination?

He reflected that the progressive extension of the field of individual development and experience was regressively accompanied by a restriction of the converse domain of interindividual relations.

As in what ways?

From inexistence to existence he came to many and was as one received: existence with existence he was with any as any with any: from existence to nonexistence gone he would be by all as none

perceived. (U 17.60-69)

In the first question and answer, Joyce uses number and set theories to describe the dwindling of Bloom's interpersonal relationships during the progression of his life as a reverse corollary of his intrapersonal development. The more Bloom, that amateur scientist, developed his own ideas about phenomena like the effect of gaslight on the growth of paraheliotropic trees, the less similar he was to the set of people around him, and therefore the fewer interpersonal relationships he began to have. This is a fancy way of saying Bloom became annoying, which is not much more than a superficial application of the language from Russell's text. But the following question and answer, which asks for an elaboration of the point, relates the many-one, many-many, many-0, and ∞ -0 relationships of Bloom to existence itself. While the last term is nonsensical in the arena of set theory, Joyce deploys the language and the concepts, however rudimentarily understood, to predict Bloom's entrance to eternity at the point of death: "he would be," meaning still in existence, "by all," meaning the entirety of humanity, "as none perceived," an ambiguity suggesting Bloom would exist, though outside the bounds of perceptible reality, or that his essence would be misunderstood (though apprehended) by all of humanity. In effect, Bloom's death will not result in his nonexistence but in his being in an infinite liminal time between temporality and eternity that will define his status as the returning king/hero. In that way, Joyce uses the mathematical concept of the limit (something that can be approached but never reached) and Cantorian infinity to express a quasi-religious view of Bloom's eternal nature. Modern mathematics therefore merges with the mythic along a continuum in order to create an intersecting parallel, a decidedly post-Euclidean point of view, albeit a fictional construction. This is the kind of operation to which Eliot refers in his articles

in *The Dial* and *The Egoist*, and which is nicely summed up in a note that reads “Mithaca” (Herring *Ulysses Notesheets* 459.40).

The passage above prefigures the most important section of “Ithaca,” where Bloom and Stephen are described as cosmic wanderers and their relationships attain astronomic dimensions. The notes from Russell that Joyce used for the earlier passage build on ones that appear in Add. MS. 49975, which were used specifically for the segment describing Bloom's cometary orbit and spiritual rebirth as the returning king/hero. Those notes can be grouped as follows. The parenthetical citations refer to pages in Herring's *Joyce's Ulysses Notesheets in the British Museum*.

- B <During vast, starspeckled night. Wanderers of the ages. Restless> (421)
- R <what causes that?> (425)
- R <9 years wander (Cassiopeia)> (428)
- B <no fixed stars> (454)
- B <variable suns> (454)
- R < Δ in Cassiopeia brighter than Sirius> (454)
- B <reappeared in Scorpion 1914> (454)
- B <in Northern Crown 1866 new star.> (454)
- R <non(entity)> (456)
- B <telescopic planets> (460)
- B <comet wandering jew> (460)
- B <Sun calls comet back> (461)
- B <variable> (470)
- B <intersect> (470)
- G <boundary of space> (472)
- MB spasm old clockface (474)
- G <space reversible time no> (474)
- Eucl. space no total curvature of spine (Milly) (474)
- Lobatchewsky const. tot. curv. neg (474)
- Riemann “ “ “ pos. (474)
- B <Planets—they ?wanderers> (482)
- B <Wandering jew—moto perpetuo> (482)
- R <incalculable> (487)
- R <universal arithmetic> (488)

In combining astronomic data, scientific and geometrical concepts, and the association of wandering with both celestial motion and Jewishness, this group of notes forms the backbone for the interrelated ideas that most characterize “Ithaca,” including the catechistic method and

the Homeric parallel. There is significant continuity with the mechanics of “Wandering Rocks,” as it pertains to the core associated concepts of wandering, individualism, social marginalization, and astronomy. What emerges in this collation, likewise, is not a sense of Newtonian mechanistic astronomy, but an interest in idiosyncrasy and aberration, which is more in line with the Einsteinian. For instance, one note on page 454 recognizes that there are no fixed stars, but it gets changed to fixed in the “Ithaca” passage for which it was used, indicating that Joyce is aware of the newer mechanics but included the old for the sake of the parody. In the notes it also appears that Joyce is working out competing notions of geometry. On page 474 of Herring's *Ulysses Notesheets* where Euclidean space (empty, infinite, “straight”) is somehow contrasted with the curvature of Milly's spine (whatever that might mean), Joyce also makes brief jottings about Nikolai Lobatchewsky and Bernard Riemann, two mid-Nineteenth century geometers who developed fully post-Euclidean. Riemann in particular developed a geometry of curved space or “manifolds” that are infinite and bounded, which Einstein used to formulate his relativity theories. One consequence of that type of geometry is the notion that curving space might fold into itself and blend different times together, a very significant consequence not only for the notion of spatial parallelism, for which the Euclidean cannot hold, but also for Joyce's mythic method. In a geometry based on a curvilinear model of space, parallel lines can intersect, meaning, with Einstein, that two different objects traveling along different lines at different times can occupy the same point in space simultaneously. This points toward a post-Euclidean model for the Homeric parallel of *Ulysses*, meaning that the ancient participates in the modern in an intersected and heterochronic way.

The notes above on curvilinear geometry and astronomy are concentrated into a passage

detailing Bloom's cometary orbit and rebirth, suggesting intersecting parallels as the true model for the mythic method. During the section in which Bloom weighs the desirable and undesirable consequences of leaving Molly, chiefly among the former is the prospect of domestic and foreign travel. This notion is amplified to astronomic dimensions which, from the notes, bear some non-Euclidean notions of space and Einsteinian notions of space-time. It also rhymes with the continua of number relations, of finitude to infinity, and of temporality to eternity that come from Russell.

What universal binomial denominations would be his as entity and nonentity?
Assumed by any or known to none. Everyman or Noman.

What tributes his?
Honour and gifts of strangers, the friends of Everyman. A nymph immortal, beauty, the bride of Noman.

Would the departed never nowhere nohow reappear?
Ever he would wander, selfcompelled, to the extreme limit of his cometary orbit, beyond the fixed stars and variable suns and telescopic planets, astronomical waifs and strays, to the extreme boundary of space, passing from land to land, among peoples, amid events. Somewhere imperceptibly he would hear and somehow reluctantly, suncompelled, obey the summons of recall. Whence, disappearing from the constellation of the Northern Crown he would somehow reappear reborn above delta in the constellation of Cassiopeia and after incalculable eons of peregrination return an estranged avenger, a wrecker of justice on malefactors, a dark crusader, a sleeper awakened, with financial resources (by supposition) surpassing those of Rothschild or of the silver king.

What would render such return irrational?
An unsatisfactory equation between an exodus and return in time through reversible space and an exodus and return in space through irreversible time. (U 17.2006-2027)

Several elements in this passage involve non-Euclidean space and Einsteinian space-time. That Bloom-as-comet will travel through bounded and reversible space suggests the manifolds of a Riemannian geometry, which is what Einstein used to formulate the general theory of relativity and its assertion of gravity as spatial warping. The element of time and time planes is involved where Bloom will change into a crusader, transforming a passive modern Jew into an avenging Christian warrior of the past. One way to understand Bloom's change into a crusader might be

as a result of the slowing down of time or intersecting of space-times as he passes the intense gravitational field of delta in the constellation of Cassiopeia and the “incalculable eons” (rather than nine years) it takes to return to Earth from there. This change seems to be brought about by the folded space, introducing multiple layers of time onto each other to recreate the hero/king in another composite of old and new. This is the same metempsychotic process that turned Odysseus into Leopold Bloom, and which will be involved in the telescoping of characters and archetypes in *Finnegans Wake*.

Slightly later in the chapter, Bloom has the impression of Major Tweedy in Molly's face (U 17.2081-2083), which is followed by a further impression that evokes a non-Euclidean notion of parallelism.

What recurrent impressions of the same were possible by hypothesis?
Retreating, at the terminus of the Great Northern Railway, Amiens street, with constant uniform acceleration, along parallel lines meeting at infinity, if produced: along parallel lines, reproduced from infinity, with constant uniform retardation, at the terminus of the Great Northern Railway, Amiens street, returning. (U 17.2084-2089)

In Euclidean plane geometry, which conceives of a flat space, parallel lines never meet. Intersecting parallels are only conceivable in a post-Euclidean geometry involving curved space. This passage therefore contains another another type of journey/return that, like the cometary journey shortly preceding, involves an articulation of non-Euclidean space within an Einsteinian space-time. The actual universe is curvilinear, idiosyncratic and imperfect in a way that the Euclidean and Newtonian cannot fully describe. Joyce parodies them and uses Einsteinian and post-Euclidean geometry to reflect this updated view of the universe, which continues the humanistic discourse of *The Egoist* and *The Little Review*. “Ithaca” is therefore a kind of *reductio ad absurdum* that shows the dead end of literary realism and the novel. In that way, true to its geometrical heritage, the episode is more about the relationships between Bloom,

Stephen, the physical universe, and other forms of human experience, rather than the furniture of the universe (despite the clutter of 7 Eccles street).

Conclusion

The final two stages of composition of *Ulysses* span the emergence of Einstein from an obscure reference in avant-garde literary culture to a public figure in mass culture. “Wandering Rocks,” the first episode to break from the initial style, participates in avant-garde magazine discourse that questions the scientific nature of the event, before Einstein's public exposition, as part of a program of individualist anarchism. “Ithaca,” coming after Einstein's “arrival” and coinciding with Joyce's publicity efforts, draws from an old anonymous textbook and Russell's new introduction to modern logic. The former fell outside of any contemporary print cultural context while the latter circulated among the educated elite of London. These various sources—the British and American avant-garde, the outdated scholastic, the London elite—might seem strangely eclectic, yet they point toward Joyce's increasing interest in both the science itself and its pertinence to new humanistic thought. For that reason, these contexts correspond to the symbolic efflorescence of *Ulysses* during the latter stages of its development, where scientific and quantitative concepts become integral to the overall structure of the novel as it attempts to articulate a renewed and liberated vision of modern humanity. *Ulysses* therefore embodies the values of limited perspective and intersecting parallels in questioning the cultural and historical heritage of modernity.

Chapter 3: *Finnegans Wake* and Popular Science in the Inter-War Mainstream and Avant-Garde, 1923-1939

Obviously, it is difficult for any reader to follow with confidence the tremendous wave-lengths of Mr. Joyce. Equally obviously, his method is an innovation destructive of the time-sequence, which had hitherto formed the framework of the English novel. Joyce is the Einstein of English fiction. Hence his importance. Yet I do not contend that his works furnish very amenable reading.

—Harold Nicolson, *The New Spirit in Literature: An Essay Introductory to Twelve Talks*, B.B.C. pamphlet, Summer or Fall 1931, p. 35.

The end portion of *Ulysses* was mostly already planned by the time Arthur Eddington made Albert Einstein a public figure in November 1919, yet *Finnegans Wake* developed entirely amid the powerful influence of the inter-war science popularization industry that followed. In addition to the countless articles published in newspapers and generalist periodicals, a canon of books popularizing Einstein's relativity theories developed from the 1920s through the 1930s. These books include Eddington's *Space, Time and Gravitation* (1920) and *The Nature of the Physical World* (1928), J.W.N. Sullivan's *Aspects of Science* (1925), Bertrand Russell's *The ABC of Relativity* (1925), E.A. Burt's *The Metaphysical Foundations of Modern Physical Science* (1925), A.N. Whitehead's *Science and the Modern World* (1925), and James Jeans' *The Mysterious Universe* (1930). Amid the post-war confusion and humanistic crisis, these books sought not just to explain advanced physical theories to a generally educated audience, but to reassure the reading public about the integrity of the universe and the human place within it. They often quote English literature to emphasize their humanistic orientation, fitting in with the post-war trend of philosophical and literary works that were organized by all-encompassing schemata, such as R.G. Collingwood's *Speculum Mentis; or the Map of Knowledge* (1926) and W.B. Yeats' *A Vision*

(1925). In that way, the emphasis on wholeness and unity continued from the pre-war and wartime years.

Pre-war modernism was intent upon reinventing the Western literary tradition, which inter-war modernism continued by means of an obsession with time, space, and other metaphysical principles, driven largely by the popularization of Einstein's theories. Some of the popular science authors, notably Sullivan and Russell, had intimate ties with Bloomsbury and other modernist writers. Sullivan, for example, contributed the lead article to the initial number of Wyndham Lewis' magazine *The Enemy* (January 1927) and was also sought by Joyce to write an introduction to a fragmentary publication of *Tales Told of Shem and Shaun* in 1929. The political dimension of this development will be considered shortly, but for now it suffices to say that inter-war modernism, especially the novel, would not have taken the shape it did were it not for the fact that the new physics was thoroughly embedded in the humanistic discourse of both mainstream and avant-garde print culture, and that the ideas of Einstein were promulgated through the publishing networks of particular modernist writers. *Finnegans Wake* is a primary example of the embodiment of the new physics and modernist humanism in the form of an experimental novel with ties both to the mainstream and the avant-garde presses.

Scholars have usually explained the new physics in *Finnegans Wake* as a development within the obscure avant-garde context of the 1920s space-time debate between Lewis, Joyce, Stein and other modernists. However, a closer look at *The Enemy*, Lewis' magazine that lambasted various contemporaries for being too time-obsessed, reveals that the debate grew specifically out of and engaged specifically with the science popularization industry of mainstream British print culture. There is a much closer and broader relationship between these

two realms than has previously been supposed.

With a few exceptions, the scholarly field has primarily addressed the question of physics in *Finnegans Wake* along the lines of conceptual affinity, with a *Zeitgeist* approach to the historical context and Joyce's possible knowledge. Duszenko eliminates the necessity of rebuilding a comprehensive argument for the presence of Einsteinian principles in the *Wake*, so I present here an overview of articles, essays, books, and a dissertation that directly address that topic. Except for the battles between Joyce, Lewis, and their respective camps during the 1920s and 1930s, there was not much criticism on physics and the *Wake* until the 1970s and 1980s.

In "Science 'Bites the Dust', an Analysis of FW: 415.15-19," Edward J. Cronin discusses the polar opposition of science and art, personified as the Ondt and Gracehoper in the following passage from the *Wake*.

For if sciencium (what's what) can mute uns nought, 'a thought, abought the Great Sommboddy within the Omniboss, perhaps an artsaccord (hoot's hoot) might sing ums tumtim abutt the Little Newbuddies that ring his panch (415.15-19).

According to Cronin, this passage is spoken by Shem as the Gracehoper, who says that science, in allowing us to say what's what, does not allow us to say anything about God, the "Great Sommboddy" hiding within the mysterious machine of his creation ("the Omniboss"). Art, however, can tell us something about his creation. As will be discussed fully below, this passage is a response to the first issue of *The Enemy*, where Wyndham Lewis attacks Joyce and other members of the "Time-cult" for pursuing a too-narrow view of the arts in relation to other disciplines and for acceding too much authority to science.

Cronin's reading of the "Ondt and the Gracehoper" highlights the *Wake*'s connection of learning with a fallen state.

The Latin for science is *scientia*, a feminine noun. Joyce makes the word neuter ('sciencium'), and defines it, according to Aristotle, as the study of that which is ('(what's what)'). The effect of the study of this neuter noun is a series of negatives: 'mute', 'un[s]', and 'nought'. Science, then, as a discourse upon God, can make us mute, can make us practically dumb like Mutt and Jute, and worst of all, a mutant, or 'An individual or organism differing from the parental strain or strains.....' (*American Heritage Dictionary*). The essential mutation in Christian myth came about through 'science', or through Adam and Eve's desire to know. (24)

There is a sense here that science either contributes to or exposes our human incompleteness, or perhaps denies our metaphysical essence. It either causes us moderns to fall or shows us that we are fallen, contained in the look back to the Edenic past, which was ruined by the acquisition of knowledge. The Gracehoper's speech makes a case for the integration of art and science, an important humanistic argument that has many echoes in the mainstream British print culture of 1927, but which Cronin does not mention.

"Some Reflections of Physics in *Finnegans Wake*," by Michael Langdon, asserts that there is a shift from discrete character and setting in Joyce's work through *Ulysses* to something less discrete in the *Wake*. In explaining this, Langdon compares the probability-based familial relations of subatomic particles in quantum mechanics with those of the *Wake*'s figures. What is fundamental is not so much the particles but the relationships, a claim somewhat substantiated later in the article. This would accord with the transaccidentation of the *Wake*, in which the same relationships and essences reappear in different guises. The way the analogy gets made, though, is very forced, as there is still no demonstration of why it is necessary to think this way in terms of the *Wake*.

An interesting paragraph about half-way through discusses time in Joyce's work as part of a comparison of the activities of the SLAC nuclear physics lab at Stanford with the processes of a novel

The larger reflection of creation-annihilation as a rhythm of human reality lies in

Joyce's use (and abuse?) of time. Time in *Ulysses* is static movement, reflecting as it does the freshness of fleshly life captured into the processes of eternity, as young love is impounded in the frieze on Keats' urn. The novel-as-process is both *in* time, reflecting explicit poles of reality examined as under a magnifying glass, and *outside* or *not-in* time, its summation a mirror-image of the known, held forever apart from the immediate and so both dead and deathless. By contrast, the *Wake* is in a sense almost totally *outside* or *not-in* time. As a total ideation, a total *a priori* construct, the novel still draws essential forms, rhythms and images from social and individual historical actuality, and simultaneously is completely self-consistent, its self-referential elements radiating an immediacy, paradoxically, which still derives from its grounding in the alien literal. This perilous existence, on the fence between two usually exclusive universes, constitutes creation/life and annihilation/destruction/death within the novel-context in its full literary macroscopic significance. (366, Langdon's emphases).

The major problem with this passage is that it draws comparisons with contemporary sub-atomic physics that have no necessary connection with Joyce in history. Perhaps the most egregious example occurs later, where he discusses the organization of allusions.

This intense manipulation of scattered constituents into the radius of the node's thematic whole is a viable analogy to the bunched physical particles which form macroentities while individual particles, elicited from beamed particle streams through forceful collision, are deliberately manipulated. (369)

Langdon is correct in saying that the sites where allusions occur are atomized and spread out in multileveled constructions (i.e. puns, portmanteaux, neologisms, blended expressions), rather than in discrete blocks of unified narrative on a particular theme or with particular connotations. While the realm of sub-atomic physics is an interesting metaphor for describing the process of reading such a text, there is again no historical basis to suppose that Joyce was doing anything like this.

David Overstreet's "Oxymoronic Language and Logic in Quantum Mechanics and James Joyce" is about the coexistence of mutually exclusive opposites in nature, thought, and art. The oxymoron—a mystical yoking of discrete opposites into a metaphysical union—is aesthetic (37). It is a paradoxical metaphor (38). Overstreet considers the reader a conceptualizer who derives pleasure and stimulation from the perception and understanding of the oxymoron. He goes on to say that quantum theory is oxymoronic, implying that it is also

aesthetic. However, Overstreet, like the previously discussed scholars, also ignores any material basis for reading quantum mechanics into *Finnegans Wake*.

The scholarship of the 1990s continues much of the concern with language and quantum mechanics. In “Physics, Rhetoric, and the Language of *Finnegans Wake*,” Dirk Vanderbeke tracks some of the main characteristics of quantum mechanics (complementarity, “lack of identity,” observer participation, holism) and sub-atomic physics as they relate to the style of the *Wake*. For example, Vanderbeke quotes Niels Bohr as saying that physics needs a new language that is “not a precise one that can use normal logical syllogisms, but evokes images that only have a vague tendency toward reality” (252). This approach still disregards the lack of material connections in Joyce's historical context.

While Donald Theall does touch on physics and science in *James Joyce's Techno-Poetics*, he is primarily concerned with the communications and media theory of Marshall McLuhan, as well as Bakhtin's dialogism and polyglossia. Theall's basic assertion about physics, like the scholars above, is that the style of the *Wake* mimics the subatomic phenomena of quantum mechanics. The writing sometimes behaves as a flow (wave) and at other times as a particulate entity, forming an analog to the phenomenon of complementarity. Theall asserts that there is also an uncertainty principle governing all meaning, and that this is consciously exploited by Joyce in the *Wake*. Like the scholars above, Theall points to the collusion of contradictory or paradoxical relationships in the puns, portmanteaux, and other verbal constructions as evidence of a kind of quantum mechanics at work in the communication that is this novel. Like the preceding articles, Theall's study does not provide a rigorous account of the historical context and commits the error of anachronism.

The most accurate article on physics and the *Wake* is Andrzej Duszenko's "The Relativity Theory in *Finnegans Wake*." Its succinct introduction gives a compelling account of how the space-time debate affected artists in 1920s and 1930s Paris, prompting some "to embrace relativity as a dramatic scientific counterpart to their own artistic and philosophical endeavors" (62). Duszenko is careful to warn, like the writers of *Our Exag*, that "[Joyce's] method consisted of selecting those elements that had a direct bearing on his work and disregarding whatever did not suit his purpose" (62).

The next section of the essay gives an efficient sampling of the phrases and segments of the *Wake* that comprise the Einsteinian motif-cluster. Due to their abundance I will not repeat them here, but the main idea is aptly set in motion as follows:

The fall of classical physics and the emergence of relativity in itself illustrated one of Joyce's main motifs in the *Wake*: that of the fall and resurrection or the constant renewal of the world. The collapse of Newtonian physics is associated in *Finnegans Wake* with the fall of the apple, both the fall of fruit as a symbol of nature's cycle of renewal and the fall of the apple that presumably effected Newton's insight into the similarity between earthly and heavenly bodies as he suddenly saw a likeness between the falling fruit and the movement of the moon. Through the apple image, the modern fall of classical physics is linked in the *Wake* with the biblical fall, and sometimes the two motifs are interrelated. (62)

Among the examples in the *Wake* that he uses to furnish this idea are various iterations of the Shem-Shaun polarity and the unity of opposites (time-space, respectively), the stone and the elm, and the four dimensions of spacetime as represented by the Four Old Men. The connection of Vico's cyclical vision of history (the eternal return) is connected to Einstein's curved universe. And the final section of the essay details Joyce's conflict with Lewis as represented in the *Wake*, identifying the Einsteinian elements as a hybrid solution to Lewis' "madness" (i.e. it's space-time that makes the world tick, not solely one or the other). The general idea is that the Fall of man from Eden through the knowledge of creation is connected

to the spacetime flow of the river and, thus, the *Wake* itself.

Finally, Micheal Goldberg's dissertation, "Moving Bodies: James Joyce and the 'New Physics'" tracks the influence of relativity on Joyce, which he claims was "in the air" during the composition of *Ulysses* and *Finnegans Wake*. Goldberg summarizes the argument as follows:

Joyce's human-centered aesthetic can be called "Einsteinian narrative," and it includes bodies in motion, cinematic style, and multiple perspectives (including mythic ones). The final result is a novelistic form in which the subject (both storyteller and reader) and the object (the story) are all in motion with respect to each other. The result of this form is a full, objective, thorough representation of modern Dublin and modern humanity. My project climaxes by arguing that pieces of *Finnegans Wake* consist of Joyce setting up a dichotomy. On the one side, Joyce suggests Wyndham Lewis as representative of the Fascistic, "hard" modernist whose vision of art draws from out-dated Newtonian absolute reference frames. Contrary to this, Joyce represents himself as a "soft," Einsteinian modernist, who (though flawed) privileges an intuitive, subjective, humanist agenda. (iii)

It was actually Lewis who set up this hard/soft dichotomy in *The Enemy* as part of his response to contemporary writers and other relevant topics in mainstream culture. Goldberg is correct in acknowledging the fact that perspective and the mythic method are used in Joyce's final two works to engender a relativist, novelistic structure. However, the historical basis for the reading is not clearly established.

Though Duszenko and Goldberg mention the Lewis conflict, most of these studies have in common a lack of material connection to the sources of Joyce's physics. While it may be true that, in an acausal *Zeitgeist* model like that of Vargish and Mook, *Finnegans Wake* shares some interesting analogical structures with the quantum mechanics, it is more interesting to look at specifically what Joyce knew and how he knew it. The contours of his contacts with new physics in the anglophone print cultures available to him in Paris have much to say not only about how the science helped to form the *Wake*, but about how the novel was being reconceptualized in response to specific humanistic and artistic crises.

Science and Aesthetics in *The Enemy* and *Work In Progress*

The broad appeal and humanist mission of popular science books made inroads to many areas of British print culture between the wars. Their tenor, though friendly, often spoke of advanced developments in the sciences and in thought and the arts generally. In doing so, they continued the perception of the new physics as revolutionary and salvific that began in certain corners of the pre-war and wartime avant-garde but in a manner that made it accessible—rather than dehabitualizing—to a general audience. During the 1920s, the fact that Einstein was a German scientist elicited a range of responses in a British public still raw from the war. Conservative newspapers such as the *Daily Mail* and the *Morning Sun* often attacked Einstein's theories as incomprehensible and foreign, while commentators in the more liberal press saw them as a means to improving international relations. It is that conflict, in part, that prompted Wyndham Lewis to create a new magazine called *The Enemy*, which ran its first of only three numbers on January 1, 1927.

The Enemy positioned itself against what Lewis detected as a renewed tendency of critics to espouse works aligned with the public taste, rather than to criticize them independently. Lewis saw time-based art and philosophy as forming the largest part of the public taste, so his magazine distinguished itself by attacking all of the so-called revolutionary writers and thinkers who organized and styled their works around the exploration of time. Gertrude Stein, Anita Loos, Marcel Proust, James Joyce, and even Ezra Pound did not escape Lewis' salvos, which made repeated derogatory references to Einstein, Bergson, Alexander, and Whitehead, among other philosophers. It is well known in scholarly circles that much of Joyce's work on *Finnegans*

Wake during the late 1920s and early 1930s was a direct response to Lewis' attacks in *The Enemy* and the book *Time and Western Man* (1927), which was mostly composed of the long multi-part essay "The Revolutionary Simpleton" appearing in volume 1. However, what has not been thoroughly examined is that fact that Lewis attacked the popular science industry every bit as much as he attacked Einstein himself.

The first paratext of volume 1, "Preliminary Note to Public," is a rallying call for a more independent critical assessment of the popular science industry and the arts.

The arts and sciences (for what applies to art applies to science), if they are to survive, have to make an organisation of their own. An appeal is made here for some sort of conscious co-operation. Any people interested, therefore, in the activities outlined in this paper should get into touch at once with the organisation that it is here attempted to build up, and support it by some deliberate propagandist zeal.... (vii)

The mission of this organization will be to "publicly repudiat[e] any of those treacherous or unreal claims to 'impartiality,' the scientific-impersonal, or all that suggestion of detached omniscience, absence of *partis-pris*, which is such a feature of our time (in which every activity, even the least amenable to exact method, apes positive science)...." ("Editorial" ix-x). In short, despite his claim not to be forming a movement, he is organizing a revolt against the prominence of scientific realism in literature—which means the novel, for all of his literary targets are novelists—as well as the uncritical acceptance of its relationship with the truths claimed by popular science.

There is a distinctly anti-democratic strain in Lewis' project that directly opposes the democratic mission of the popular science industry, which aims for a greater unification of the public through an articulation of how the truths expressed in the relativity theories can restore order to the age, or "our Time."

By the Time, however, I mean something more superficial than may at first be

supposed: I mean rather what passes itself off as the Time, and exists as the chronological figure-head of an only conventionally discrete and homogeneous something that is “us,” and not the creative impulses at work beneath the distorted surface of our world. It is essentially our crust or shell that is to-day highly mechanised, uniform and stiff, although extremely distorted. A “Time” is in any case always a congeries [sic] of the most insignificant people within it. It is the habit of the fashionable majority at the surface to take the credit for things they have never done, and are incapable of even conceiving. It is they who pass themselves off as a mysterious Force, from which, in fact, they slavishly receive all that they possess. To-day they are less in touch than usual with that Force: there seems to be a growing hiatus. (“Editorial” xi)

In lamenting the loss of individualism and vitality, Lewis is actually continuing the pre-war and wartime Nietzschean program of *The Egoist* and *The Little Review*. This conservative reaction highlights the extent to which the aims of avant-garde literature changed after the war to a somewhat less confrontational attitude. It also highlights what Lewis sees as a dangerous conformism in the arts and in the general culture. Popular science and “Time-philosophies” are being used to create a false consensus and eradicate true criticism in the general culture, about which something must be done. For Lewis, the true nature of the Age is different from what is presented in criticism and art.

It comes as a surprise, then, that no scholar has addressed the fact that the first content item in volume 1 of *The Enemy* is an article by J.W.N. Sullivan, a music critic and author of the very popular *Aspects of Science* (1925) who was friendly with the Bloomsbury crowd and T.S. Eliot. The opening lines of “The Position of Beethoven in the Modern World” make a case for the primacy of the new physics in the cultural revolution ongoing in Western culture.

It is a fortunate circumstance that the Beethoven centenary, of which the celebrations have begun, happens to take place at a time when a great change in the scientific world outlook is preparing. This change promises to be of the greatest significance of our estimate of all the arts, and of none more than of the art of music. And the problems involved are nowhere more clearly presented than in the music of Beethoven. (1)

Similarly to Dora Marsden's essays in *The Egoist* ten years earlier, Sullivan sees an opportunity for the total revaluation occasioned by the advent of the new physics. One benefit for Sullivan

is that the new physics abandons the formerly hard distinction in science between values in nature and human values that kept humanity and the universe separate.⁴⁴ Likewise, in the old aesthetic and cultural criticism, art and music belonged to the “purely human” world and had “no transcendental function, as science has, to bring us into contact with an external reality” (3).

By way of example, Sullivan points to “the old conceptions of independence and mechanism” of Newtonian mechanics and Victorian materialism giving way to “the new conceptions of development and unity” that characterize the new physics (4). He argues for a reintegration of the realistic and the mystical because “the old scientific concepts, which did not include values, are shown to be unnecessary” (4).

Nobody familiar with recent speculations in science and philosophy can fail to notice that a new world outlook is preparing. The old mechanistic materialist universe which has been so heavy a burden on the spirit of man for the last three centuries is in process of being dissolved away. We are living at one of the nodal points of history. The curve has mounted from Descartes to Einstein, and now its direction has changed. It is no longer necessary to picture ourselves as inexplicably forlorn in an alien universe, with art as one of our “consolations.” Art need not be either a drug or a lie. (6)

Hence, Sullivan seeks to restore to art a transcendental function that connects humanity with the real world, or at least “communicates to us an attitude based upon knowledge” (6). Though Sullivan does not discuss Joyce in his article, this line of thinking is very much in agreement with what Joyce was doing in basing *Ulysses* and *Finnegans Wake* upon symbolic structures drawn from history, philosophy, mythology, and science.

No doubt, Sullivan's earlier argument in *Aspects of Science* for uniting science with a kind

⁴⁴ Sullivan is referring to the primary and secondary qualities of matter as defined by Locke. Primary qualities are those which do not vary between observers, such as length, width, and mass. Secondary qualities are those that require subjective judgment, such as color. Scientific method adopts Locke's distinction by referring only to the primary qualities. Sullivan is using the context of popular science to argue that secondary qualities (“values”) are now valid in scientific discourse.

of aesthetic mysticism appealed to Lewis, who wrote on the subject in a latter portion of the long essay “The Revolutionary Simpleton” appearing in volume 1 of *The Enemy*. Sullivan's 1925 book explores the humanistic dimensions of science in a manner that also popularizes Einstein, holding his theories up as a new direction for civilization. The preface to *Aspects of Science* reads as follows.

The papers which make up this volume have been selected because, although they deal with different aspects of various scientific ideas, yet they do illustrate, more or less, one point of view. That point of view may be described, perhaps as aesthetic, but rather better as humanistic. Scientific ideas have a history; they arose to satisfy certain human needs; to see them in their context is to see them as part of the general intellectual and emotional life of man. What they exist to do they do better than does anything else, and the needs they satisfy are not peculiar to scientific specialists. These papers try to show one or two of the many reasons why, for people who are not specialists as well as for those who are, science may be interesting. (5).

This paragraph could very well serve as the epigraph of the inter-war science popularization industry in Britain. Nearly all of the books contain a preface or quote literary passages as epigraphs that indicate a new direction for humanity in the new physics, and the need to make it accessible to all. They address the reader as an equal who can gain some purchase on the advanced domain of the specialist. Sullivan claims later that the simpler scientific language of Newton's day meant that men without special training could make valuable contributions to physics and chemistry, and that in 1925 psychology is the only science still available to amateurs: “And the 'psychological' novelist can still regard himself as being, from one point of view, a scientific man” (14-15). In that way, he continues the discourse of the novel as a scientific genre from the pre-war and wartime avant-garde print culture.

This notion of the artist and scientist being engaged in the same activity is expressed in the paratextual material of volume 1 of *The Enemy*, as quoted above, and was also expressed by Joyce in *Ulysses* and *Finnegans Wake*. Sullivan's book, like his article in *The Enemy*, widens that

discourse by claiming that art and science both assert reality in their way.

Besides serving curiosity, comprehension and practice, science offers richly satisfying objects to the aesthetic impulse. The language of aesthetics is not far to seek in the writings of men of science, and were it not that the word arouses such a proprietary fury, we should agree, reviewing their motives and the kind of their satisfactions, to call them artists. The matter of the highest art, like that of true science, is reality, and the measure in which science falls short as art is the measure in which it is incomplete as science. All good philosophy, art or science partakes of the nature of the other two. When these three are regarded as one, each will have reached its apotheosis. (*Aspects* 13)

Sullivan's statement synthesizes the components of thought about science and art that were disparate in the pre-war avant-garde discourse described in chapters 1 and 2 of this dissertation. Dora Marsden, whose philosophical contributions to *The Egoist* did so much to advance the cause of science in literary culture and for Joyce, was at this time composing *The Definition of the Godhead*, a metaphysical treatise on how science, the arts, and other forms of expression all evince the first principles of the universe. Unfortunately her book, which will be addressed more thoroughly below, was extremely obscure (of a run of 400 copies it sold only 6) and did not do much to contribute back to the discourse of the time. Nonetheless Joyce had similar beliefs to Sullivan, Lewis, and Marsden about the relationships between science and literature, and these become manifest in the fragments of *Work In Progress* that he published in response to them, and ultimately in *Finnegans Wake* as a whole.

Another aspect of Sullivan's book that must have appealed to Lewis' literary-critical sensibilities was the assertion that the new physics was more vital, more beautiful, and more important than contemporary letters. The Nietzschean dimension of vitality and revaluation—also a continuation of the pre-war avant-garde discourse—stands out in this line of thinking.

[The new physics] has, indeed, already established a perspective which leads to a revaluation of the Victorian age. There have already been many writers who have thought that age more memorable for its science than for its other achievements, that its significance to humanity lay more in the work of Darwin, Faraday, and Maxwell than in that of Tennyson and Matthew Arnold, or even in that of Mr. Gladstone, but the perspective we have now obtained puts the

matter almost beyond doubt. (145)

Sullivan seems to be enacting his dictum that the man of science may now pronounce on all matters cultural and social. This statement gives a sense of the importance and level of interest in popular science during mid-1920s Britain, highlighting the extent to which Lewis abhorred both the popular science industry and contemporary avant-garde literature. His motivation for including Sullivan in the first issue of *The Enemy* must have been due to the fact that Sullivan is independently critical of both popular science and literature.

His pronouncements soon turn to his own period, where he claims the artistic superiority of contemporary science over contemporary literature.

The great constructions of science are grandiose without being chimerical; they are beautiful but not deceiving. Indeed, one sometimes has the feeling that it is only in science, nowadays, that one still meets with the spirit of adventure, the sense of boundless and glorious possibilities, with an exultant hope. Our poets and men of letters generally are extraordinarily tame and disillusioned creatures compared with our romantic and daring men of science. It is refreshing to turn from the lamentations of our literary men to such a book as the *Space, Time, Matter* of Hermann Weyl, if only for the fervour, the immense enthusiasm with which that highly accomplished mathematician writes. Einstein is his Columbus, with the difference that his America has indicated the existence of yet vaster continents. (147-148)

The forward-looking optimism as well as the spatially oriented sense of pioneering conquest echoes Lewis' arguments about the misappropriation of popular science by "the spacetimeists," who, he claims, only regard the temporal dimension. At any rate, the passion and romance of adventure formerly ascribed to literature is now presented instead as the domain of new scientific inquiry.

Sullivan quotes James Clerk Maxwell in the epigraph of a chapter on the mysterious aspects of science: "It is a universal condition of the enjoyable that the mind must believe in the existence of a law and yet have a mystery to move about in" (151). This way of thinking is similar to Joyce's underpinning structures in *Ulysses* and *Finnegans Wake*, which present a universal

law, or at least symbolically so, of humanity and history, but also a fluidity that allows for multiple interpretation and renewed experience.

The chapter then makes an interesting comment on the *Zeitgeist*, which speaks to the reevaluation of art, civilization, and all intellectual disciplines.

That our thinking, and with it our feeling, is largely conditioned by assumptions which have no logical necessity, is a commonplace of philosophy, and is indeed apparent to the slightest introspection. Characteristic of any age is a body of beliefs, resting on more or less good evidence, and a group of feelings associated with those beliefs. The German language, so rich in indefinite but valuable general terms, afforded the word *Zeitgeist* for this complex, a word we have directly translated into the Spirit of the Age. The name is a good one; it indicates that we are dealing with something which is widely diffused and also subject to change. It is subject to change, but it plays a dominating rôle in the age to which it belongs. The spirit of the Age is something that practically all the intellectual life of the age has in common. It is not manifested only in philosophical treatises or in works of art; it is often manifested even more strikingly in statesmen's speeches and a country's domestic and foreign policy. It is a kind of intellectual and emotional atmosphere of which everybody is aware, but which probably nobody could define. We see, however, that a very important part of it consists of a sense of probability, of a tendency to accept certain kinds of explanation and to reject others.

For the last few decades, at any rate, Science has been the chief factor in forming this omnipresent sense of probability. (151-152)

The argument here that science is the dominant note in the spirit of the age, combined with the earlier statement that there is more vitality in contemporary science than in contemporary literature, continues much of the modernist discourse that began in the early days of *The Egoist* and *The Little Review*. Like the contributors to those magazines, Sullivan looks to advance the areas in which feeling can find outlets for new sensibilities and where the quintessential nature of the modern can be found. His argument completes the train of thought begun by those early magazine contributors who saw the “scientific accuracy” of the “new novel” as the key to liberation from the stuffy burdens of Victorian materialism in that it was closer to the new spirit of the age.

Lewis' long essay “The Revolutionary Simpleton” continues the focus on the *Zeitgeist* that abounds volume 1 of *The Enemy*. In identifying science as the predominant aspect of the

spirit of the age, he critiques popular science and what he considers to be the misappropriation of scientific concepts in art, literature, and criticism. The essay's epigraph is a quote from Whitehead's popular book, *Science and the Modern World*: "It is in literature that the concrete outlook of humanity receives its expression. Accordingly, it is to literature that we must look, particularly in its more concrete forms, namely, in poetry and drama, if we hope to discover the inward thoughts of a generation" (25).

In continuing the discourse about "the Age" from the initial paratexts, Lewis identifies both the new physics and its popularizers as conspiring to build a fraudulent social outlook. The preface addresses the Public in order to indicate what the essay will show.

How the "time-lessness" of einsteinian physics, and the time-obsessed flux of Bergson, merge into each other; and how they have conspired to produce, upon the innocent plane of popularisation, a sort of mystical time-cult....

The main characteristic of the time-mind from the outset has been a hostility to what it calls the "spatialising" process of a mind *not* a time-mind. It is this "spatialising" capacity and instinct that it everywhere assails. In its place it would put the time-view, the flux. It asks us to see everything *sub specie temporis*. It is the criticism of this view, the time-view, from the position of the plastic or the visual intelligence, that I am submitting to the Public in this book. (27)

The association of space with a visual intelligence here will become one of the primary characteristics of Shaun, who comes to embody Lewis in the form of Professor Jones in *Finnegans Wake*. Lewis' emphasis on space and abhorrence of literature's tendency to focus on the past comes from his fascist politics. There is a marked difference in tone from Sullivan: Lewis is not a popularizer but a "corrector." And Lewis sees most popular science as contributing to the overemphasis upon time that is causing the Public to become too unified in thought. This is the very phenomenon against which early modernism pitted itself, a fight which Lewis is attempting to continue. His later statement on the individualism of the Englishman makes that point extremely clear: "'individualist' as he is also called—not moving in perfect and meticulous

unison with his neighbors, if even eccentric" (50). This definition of individualism recalls the significance of mechanics, its connection to individualist-anarchism in the "Wandering Rocks" episode of *Ulysses*, and its location within the discourse of *The Egoist* and *The Little Review*. Lewis, like Sullivan, is continuing to espouse certain aspects of early modernist discourse in the avant-garde culture that also saw the introduction of Joyce.

Lewis' opposition to time is expanded late in the essay, in a section titled "An Analysis of the Mind of James Joyce," where Lewis accuses Joyce of being too "soft," of having an "unorganized susceptibility to influences" from time-cult writers such as Gertrude Stein (95). He blames this lack of spine for enabling a dangerous homogenization of culture, in which "[l]ocal colours... fade so quickly that already one uniform grey tint has supervened," which is related to "the artificially-fostered nationalism rampant throughout the world since the War" (99). Lewis attributes the cause of these to "astonishing advances in applied science and in industrial technique [that] made this inevitable" (99). The fear that science has a de-individualizing effect echoes Huntly Carter's articles about the artist in society in the wartime numbers of *The Egoist*. Lewis observes the same process behind the disappearance of social order and the ensuing artificial "class consciousness," feminism and sex-politics, and international uniformity (100, 102). It is not exactly clear how or why Lewis associates these phenomena with Joyce, except for his assertion that the obsession of *Ulysses* with Bergsonian psychological time (*durée*) and the past makes its presentation of Dublin a study not of local color but of local time (104). Samuel Alexander, Whitehead, Spengler, and Einstein are "spacetimeists" equivalent to Bergson in this context (105, 106).

Lewis disagrees with Sullivan on the subject of the new physics in several key regards.

Whereas Sullivan considers relativity and psychoanalysis to be free from Victorian materialism, Lewis sees them inhabiting a deceitful continuity

So from, say, the birth of Bergson, to the present day, one vast orthodoxy has been in process of maturing in the world of science and philosophy. The material had already collected into a considerable patrimony by the time Bergson was ready to give it a philosophic form. The Darwinian Theory and all the background of nineteenth-century materialistic thought was already behind it. Under the characteristic headings Duration and Relativity the nineteenth-century mechanistic belief has now assumed a final form. It is there for anyone to study at his leisure, and to take or leave. It will assume, from time to time, many new shapes, but it will certainly not change its essential nature again till its doomsday; for I believe that in it we have reached one of the poles of the human intelligence, the negative, as it were. So it is deeply-rooted, very ancient, and quite defined. (106)

And whereas Sullivan applauds the efforts of the popularization industry to connect the non-specialist with the tenets of advanced science, Lewis sees it as a lead catalyst of the cultural *malaise*.

The physical or philosophical theory in the ascendant at any moment is humbly and reverently picked up, in an abridged, and usually meaningless, form, by the majority of people. So it was with Darwin, so it is with Einstein. Apart from questions of expert qualification, few people are able to appreciate all that is involved in such theories. There is certainly never a question in their mind of “doubting” it. It is not a thing to doubt, but one that is either easy or impossible to understand, as the case may be. To repudiate it would be a still wilder presumption. It has to be “studied” in the few spare minutes that most people consider may be saved for such things from parties, golf, motoring and bridge, or the Russian Ballet. Then they will say in conversation, “It appears that there is no such thing as time”; or “Everything is relative, Einstein says. I always thought it was.” (Relativity seldom involves much more than that to people.) More often than not the professors, who adopt and expound whatever theory has just succeeded, examine it as little. It *amuses* them; professors, like other people, have their amusements—their work is theirs. It is uncomfortable to be unorthodox, life is short, science is long, much longer than art; that is sufficient. (107-108)

In a sense, Lewis is really against the misrepresentation of science through its popularization and against what he sees as a conspiracy to align non-specialists in the same way of thinking with the “time-mind.”

Lewis equates the materialism of the so-called new science with literary naturalism and, by extension, with Joyce. He claims that the over-materialism of *Ulysses* constitutes a “torrent of matter [that] is the einsteinian flux” (121). For Lewis, of the many types of naturalism

expressed in the novel genre, the better type is the scientific one that presents an exterior view leading to a “hardness,” not, as in Joyce's psychological naturalism, an interior view leading to “softness.”

I say, “naturalism interpreted this way” has the result, because there are so many varieties of naturalism. Some scientific naturalism does deal with things from the outside, indeed, and so achieves a very different effect—one of hardness, not of softness. But the method of *Ulysses* imposes a softness, flabbiness and vagueness everywhere in its bergsonian fluidity. It was in the company of that old magician, Sigmund Freud, that Joyce learnt the way into the Aladdin's cave where he manufactured his *Ulysses*; and the philosophic flux-stream has its source, too, in that magical cavern. (122)

In the types of modernism identified by Godlberg above, Lewis' preference is for the “hard”-fascistic-spatial over the “soft”-humanist-temporal. Goldberg's distinction does not perhaps cover the nuances of Lewis' position, but it does for the most part accurately represent the antagonism to flow-based aesthetics that he shared with Pound, as we saw in chapter 1: “this flow of conSquishousness Girtie/Jimmee stuff has about FLOWED long enuff” (Read 256; from a letter at Cornell). This position continues the “hardness” of imagist poetics valued by Pound and Lewis during the war, which also saw value in the clearness and lucidity of Joyce's prose.

The influence of Bergson went down beneath the wave of formal enthusiasm that immediately preceded the War. In the arts that movement brought imagination back once more, banishing the naturalist dogmas that had obtained for fifty or sixty years. Impressionism was driven out and the great ideals of structure and of ideal significance were restored, to painting and sculpture, at all events.... There was a very powerful reaction in France against all that Bergson represented. But the War and einsteinian physics have turned the scales once more. (131-132)

While certain elements of the avant-garde network of *The Egoist* valued the less deterministic, flow-based aesthetic of what they termed post-materialist science, the ascendancy of that line of thought after the war thereby becomes threatening to the conservative positions of Lewis and Pound.

In that way, Lewis is able to assert that Einstein's theories do not derive at physical truth, but a mental—meaning temporal—one like Bergson's (129). “An *egalitarian science*, as it were, is the science of his preference, which recognises no 'objects,' that substitutes for them a cluster of 'events' or of perspectives, which shade off into each other and into other objects, and so on to infinity or eternity” (144, Lewis' emphasis). In other words, the time-thinkers who have risen to ascendancy today are in denial of the material and spatial dimensions of reality.

What “material” means in the mouth of Professor Whitehead or Professor Alexander we also have examined, and found that, emotionally, it means the opposite of anything coming under the head of “materialism.” It means *appearance* of timeless and eternal stability that the aggregation we term “an object” can have for a limited duration. Those “objects” which are our only glimpses or symbols of what is eternal, are destroyed or banished effectively by the “time” teaching I have attempted as briefly as possible, and in a preliminary way, to show. (166)

It is this line of thinking that led Lewis to claim, “I am for the physical world” (130). One major omission in all of the criticism he writes in this number, though, is that time is also a feature of the physical world. That omission was certainly not lost on Joyce.

Joyce's development of the Einstein theme in *Work In Progress* began in earnest after the initial publication of *The Enemy*. The lecture of Professor Jones, “The Mookse and the Gripes,” and “The Ondt and the Gracehoper” were direct responses to Lewis' attacks against Joyce and the time-aesthetic. Rather than responding through critical essays, these fictional fragments argued, like Einstein, for the integration of space and time by parodying the arguments and posturing of Lewis and Pound. Following the initial development and serial publication of these segments, first in *transition* and then in the fragmentary book *Tales Told of Shem and Shaun* (1929), Joyce worked the theme into the rest of the novel. In addition, Joyce mobilized his friends and acolytes to sally into the print culture and to defend against Lewis' attacks and to make the case

for Joyce's aesthetic experiments. A series of articles against *The Enemy* began appearing in *transition*, while Joyce also guided a select group of friends and acolytes in the development of a critical book on *Work In Progress*, *Our Exagmination Round His Factification for Incamination of Work In Progress* (1929), several chapters of which detail the importance of space-time to Joyce's art.

Joyce's first published responses to Lewis constituted the lecture of Professor Jones and the fable of the Mookse and the Gripes. These were first drafted in July and August of 1927 and published in *transition* 6 (August 1927). Both fragments occur in book 1.6, amid the quiz that reveals the nature of the two brothers Shaun and Shem and their relationship to each other. The eleventh question reveals the nature of Shaun, the upper half of the body, who is disposed to intellect and the visual perception of reality. Shaun views the world in a digitalized succession of discrete fragments, or photographs, emphasizing his orientation toward space. Shem, the lower half of the body, is disposed to emotion and the aural perception of reality, and perceives the world in an analog, continuous temporal stream of sound. Shaun answers that he would never help his poor brother, of whom he is ashamed. In both fragments, Joyce uses the Shaun character guised as Professor Jones to parody Lewis' backing of spatial philosophy in *The Enemy*, while Shem represents Joyce as the poorer, temporally oriented member of the pair.

Like Lewis, Professor Jones attacks the time-philosophies of Bergson, Proust, and Einstein but is ultimately unsuccessful, betraying the necessity of time in any philosophical or creative act. In a letter of August 14, 1927, Joyce wrote to Sylvia Beach that he has "allowed Shaun to speak with the voice of The Enemy" (Banta and Silverman 129), which is evident in this passage spoken by Professor Jones.

But for proceeding to conclusively confute this begging question it would be far fitter for you,
if you dare! to hasitate to consult with and consequentially attempt at my disposale of the same

dime-cash problem elsewhere naturalistically of course, from the blinkpoint of so eminent a spatialist. From it you will here notice, Schott, upon my for the first remarking you that the sophology of Bitchson while driven as under by a purely dime-dime urge is not without his cashcash characktericksticks, borrowed for its nonce ends from the fiery goodmother Miss Fortune (who the lost time we had the pleasure we have had our little *recherché* brush with, what, Schott?) and as I further could have told you as brisk as your D.B.C. behaviouristically *pailleté* with a coat of homoid icing which is in reality only a done by chance ridiculisation of the whoo-who and where's hairs theotics of Winestain. To put it all the more plumbsily. The speechform is a mere sorrogate. Whilst the quality and tality (I shall explex what you ought to mean by this with its proper when and where and why and how in the subsequent sentence) are alternativomentally harrogate and arrogate, as the gates may be. (149.14-33)

In this passage, Professor Jones attempts to shed light upon the perennial philosophical problem of time and space, referred to as the “dime-cash” problem, from the colloquialism that “time is money.” In that way, Bergson (“Bitchson”) is a proponent of the unacceptable time-philosophy, “a purely dime-dime urge,” which he seems to have derived from the “little *recherché* brush” with “lost time,” referring to Proust. Since we are still in the space medium, time is flowing backwards, and Bergson gets his ideas from Proust, rather than the other way around as it was in life. Einstein (“Winestain”) is lumped together with the other two.

Professor Jones' attempt to refute the time-philosophy deeply but clumsily (“plumbsily”) is betrayed by the word “confute,” and we see him necessarily referring to time in order to praise space. Joyce achieves this rebuttal to Lewis' criticism in passages that show its fatal flaw while referring to some of the periodicals to which he contributed.

Talis is a word often abused by many passims (I am working out a quantum theory about it for it is really most tantumising state of affairs). A pessim may frequently you to say: Have you been seeing much of Talis and Talis those times? optimately meaning: Will you put up at hree of irish? Or a ladyeater may perhaps have casualised as you temptoed her *à la sourdine*: Of your plates? Is Talis de Talis, the swordswallower, who is on at the Craterium the same Talis von Talis, the penscrusher, no funk you! who runs his duly mile? Or this is perhaps cleaner example. At a recent postvortex piece infustigation of a determinised case of chronic spinosis an extension lecturer on The Ague who out of matter of form was trying his seesers, Dr's Het Ubeleeft, borrowed the question: Why's which Suchman's *talis qualis*? to whom, as a fatter of macht, Dr Gedankje of Stoutgirth, who was wiping his whistle, toarsely retoarted: While thou beast' one zoom of a whorl! (Talis and Talis originally mean the same thing, hit it's: Qualis.) (149.34-150.14)

While *talis* is Latin for this, such, or such as, it seems to be used here for time, while *qualis*

seems to be used for space, ending with the fallacious argument that the concept of time originally meant space. In that way, the passage mocks Lewis' attempts to show that the writers and thinkers he despises are really referring to time when they speak of space or of objects. Hence, Professor Jones is unable to fulfill his "spatialist" role as "extension lecturer" without using phrases such as "frequently you to say," "those times," and "chronic spinosis" (a reference to Spinoza). In addition, several phrases refer to Lewis' activities in periodicals. The phrase "who runs his duly mile" is perhaps a reference to the *Daily Mail* (London), a conservative newspaper to which Lewis occasionally contributed during the mid-1920s and to which he refers in *The Enemy*. The phrase "recent postvortex piece infustigation" refers to pre-war Vorticism, its magazine *Blast*, and Lewis' attempts to continue the movement in *The Tyro* (1921-1922, 2 issues) and *The Enemy*.

Vorticism was a spatially-oriented visual and literary movement, similar to Futurism, that advocated an explosive break with the past by means of hard geometrical outline, abstraction, and intense energy. Its primary organ was *Blast*, though some Vorticist literature and art pieces were featured in *The Egoist* at the instigation of Pound. The phrase "The Age" refers to Lewis' invective against "the Age" in *The Enemy*. Given all of the connections in the passage above, Joyce invokes the space-time debates in modernist print culture and, by extension, the British popular science industry, in order to argue that time and space cannot be conceived separately, and furthermore that overemphasis on one mode is intellectually and artistically invalid. This aligns Joyce with Einstein as a unifier of space and time, as well as the human person, against the "spatialist" philosophies of Lewis and Pound. Joyce thereby identifies himself as humanist and Lewis/Pound as embodying a less-than-human or incomplete

worldview.

As Professor Jones inflates his “own most spacious immensity” further and further beyond the limits of reason, his inability to articulate the nature of space without reference to time leads him to recast his argument in the fable of the Mookse and the Gripes. The Mookse and the Gripes is a retelling of the fable of the Fox and the Grapes, where the Fox tries unsuccessfully to pluck grapes from a tree and then convinces himself that they were probably sour anyway. Shaun figures in the fable as the Mookse, which is simultaneously the Fox, a moocow, and an ox, while Shem is the Gripes—the Grapes and also the male genitalia. The Mookse sits on a stone across the river (ALP) from the Gripes, who is hanging in a tree. In that way, the fable represents the brothers' conflict, since Shaun is trying to acquire the genitals, which contain the power to create language, and which are in the possession of Shem as the lower half.

Shaun's condescending gesture to deliver his argument in the form of a fable—“As none of you knows javanese I will give all my easyfree translation” (152.12-13)—recalls the superior attitude Lewis takes in *The Enemy*, as opposed to the more democratic position of the popular science writers, who place themselves on the same level as the readership. The fable begins with Shaun's pathetic attempt to switch the terms of time into those of space, a reverse corollary of Lewis' tortuous attempts in *The Enemy* to show certain writers as only thinking in temporal terms: “Eins within a space and a wearywide space it wast ere wohnded a Mookse” (152.18-19). “Eins” is the German word for “once” as well as a reference to Einstein, forming a new-physical play on the traditional opening of a fable, “Once upon a time....” The fable continues to play with space and time, as when the Mookse spots the Gripes across the river,

hanging “bolt downright” from the limb of the tree, and feels that he “was fit to be dried for why had he not been having the juice of his times” (153.10-13). The Mookse asks the Gripes to genuflect and to turn himself over, but the Gripes instead taunts the Mookse with the question, “By the watch, what is the time, pace?” (154.16). However, since the Mookse lacks the creative power of root language, he cannot help but let the Gripes give him some of the words, and the Mookse again fails in his attempt to think and speak only in spatial terms: “Well, sour? Is this space of our couple of hours too dimensional for you, temporiser?” (154.25-26). The brothers' argument is unresolved when they are carried away by a mysterious woman (158.25-159.5).

In addition to Joyce's response to Lewis through development of *Work In Progress*, Eugène Jolas, Eliot Paul, and Robert Sage mounted one of several counteroffensives in *transition* 9 (December 1927), with the article “First Aid to the Enemy.” Their vehemence shows that the inter-war debate about literary form is still inextricably associated with the state of civilization, a connection explored so thoroughly since the pre-war years.

Now if Mr. Lewis had really had the courage to attempt an analysis of Joyce, he would have included the new work, an entire book of which is now available, and which is freer from both *local color* and *local time* than anything heretofore written in any language.... His remarks on Joyce are rehearsed from the pronunciamientos of various critics concerning *Ulysses*, findings of which the original authors are almost invariably ashamed today....

... Thus, heroically brandishing his lathe sword, he charges Mr. Joyce, Miss Stein, *transition*, Surrealism, Communism and other alleged danger spots in the structure of the Western World.... (Deming 380)

The counter-charge that Lewis offers no original criticism, but merely repeats what has already been said by detractors of *Ulysses*, does little positively to advance the cause of Joyce's aesthetic. Nonetheless, they do attempt to undermine Lewis' argument that local color and local time in Joyce are both antithetical to space, though in this passage there is nothing said that would

weaken Lewis' argument. The telescoping of characters and events and locations is a temporal mode that Lewis would say is time disguised as space.

While the Mookse and the Gripes introduces the theme of the tree and the stone, which represent time and space, respectively, that recurs throughout the *Wake*, there is more afoot in this story than an embodiment of the space-time debates between Lewis and Joyce. Thaine Stearns argues that Dora Marsden's writings on space and time are included in the *Wake* as well. This means that there is a still wider relationship between the avant-garde and popular science print cultures of the 1920s.

As Stearns notes, the first reference to Marsden appears a few pages before the Mookse and the Gripes, where Issy announces on page 145 that she is “so keen on that New Free Woman with novel inside” (475). *The New Freewoman* was the second magazine founded by Marsden, between *The Freewoman* and *The Egoist*, the latter of which, of course, serialized *A Portrait of the Artist as a Young Man*. Stearns suggests that, because Joyce added Issy's remark in 1936, he must have considered his history to be connected with Marsden's journals in a very fundamental way (475). This is born out if we consider the extent to which Marsden's writings in *The Egoist*, discussed in chapter 2 of this dissertation, had a bearing on the development of *Ulysses*.

Joyce kept up with Marsden's career after *The Egoist* disbanded. In a letter to Harriet Shaw Weaver of December 2, 1928, Joyce writes, “I hope Miss Marsden's book came out punctually yesterday and I am looking forward to thieveries on an unheard of scale as soon as I can find an accomplice as rascally minded as myself to read it to me” (*Letters* I 277). It is not certain that Joyce received or read *The Definition of the Godhead*, but it is possible that Weaver sent

it along. Through other letters, he was aware of Marden's ill health and her residence in the lonely village of Seldom Seen, both of which make it into the text after the publication of her book.

Stearns identifies significant changes to the Mookse and the Gripes shortly after *The Definition of the Godhead* was published. In addition to various references to the idea of space engendering time, a first principle claimed in Marsden's book, Stearns shows that Dora's ideas are presented alongside those of the other major authors named in the debate.

A more extended analysis of "The Mookse and the Gripes" shows that Joyce uses the story to introduce a Marsden-like figure and to parody the group of twentieth-century writers, including Marsden, Lewis, Bergson, Whitehead, and Samuel Alexander, who asserted positions about this metaphysical question. Several Joyce scholars have read this fable only as a response to Lewis's *Time and Western Man* (1927), which, in a chapter titled "An Analysis of the Mind of James Joyce," took *Ulysses* to task for its participation in time aesthetics. This argument does not take into account, however, at least two important considerations.... We also see here Marsden's argument in her lead essays in the *Egoist* against the separation of a single order of existence reprised in the question asked by the Mookse, if "this space... [is] too dimensional." (477)

Stearns then makes an even stronger case for the extent to which Joyce was interested in Marsden's role in the space-time debate. As mentioned before, the Mookse and the Gripes ends unresolved when a mysterious woman comes to carry the two antagonists away.

Then there came down to the thither bank a woman of no appearance (I believe she was a Black with chills at her feet) and she gathered up his hoariness the Mookse motamourfully where he was spread and carried him away to her invisible dwelling, that hights, *Aquila Rapax*, for he was the holy sacred solem and poshup spit of her boshop's apron. So you see the Mookse he had reason as I knew and you knew and he knew all along. And there came down to the hither bank a woman to all important (though they saw that she was comely, spite the cold in her heed) and, for he was as like it as blow it to a hawker's hank, she plucked down the Gripes, torn panicky autotone, in angeu from his limb and cariad away its beotitubes with her to her unseen shieling, it is, *De Rore Coeli*. And so the poor Gripes got wrong; for that is always how a Gripes is, always was and always will be. And it was never so thoughtful of either of them. (158.25-159.3)

Stearns illuminates this passage as follows:

Joyce captures two aspects of Marsden's career and character in the woman who shows up on the opposite banks of the river to carry the two combatants away; what links the two allusions to Marsden is their residence. The "woman of no appearance" carries the Mookse "away to her

invisible dwelling,” and “woman to all important” carries the Gripes “with her to her unseen shieling.” As his correspondence with Harriet Weaver attests, Joyce was well aware that Marsden, who had become a writer of no importance, was residing in Seldom Seen, in a former miner's cottage that lacked running water and electricity. Weaver, who visited Marsden several times, once complained that it was so cold there in the winter that she had to get dressed in bed, and then had to break the ice in the pipe from the spring (qtd. in Garner 156). The woman who appears in this section has “chills at her feet” and a “cold in her heed,” an allusion to Marsden's poor health, caused by her living conditions. More crucial is the function that the woman of Seldom Seen fulfills here: overseer to the end of the furious battle between the Mookse and the Gripes. Although the woman, like Wordsworth's Lucy, is unknown and unacknowledged, Joyce inverts the relationship between the living and the dead: here the unnamed woman comes to take away the near-dead combatants. In her second appearance, on “the hither bank,” the woman is “to all important,” a critique often directed at Marsden by her detractors and by Joyce's contemporaries. The unnamed woman, Marsden's stand-in in *Finnegans Wake*, is both unseen and important in Joyce's story, a paradoxical representation worthy of Marsden. In his final summation, The Mookse (the space mind) “was the holy sacred solem and poshup spit of her boshop's apron” and “had reason as I knew and you knew and he knew all along,” while “the poor Gripes got wrong.” In effect, Joyce gestures toward Marsden's argument for the preeminence of a feminine space in *The Definition of the Godhead*. (478-479)

Marsden's ideas on space, time, and gender are the opposite of how Joyce configures them in the *Wake*—ALP is the feminine principle of time—but they agree to the extent that she insists upon a combined space-time model. In that way, Marsden's characterization in the *Wake* serves as a mitigating figure in the constellation of Lewis, Bergson, Einstein, Whitehead, Alexander and other thinkers of the 1920s space-time debates. The pattern that emerges in the early fragmentary publications and revisions is that Joyce grants pride of place to the thinkers who offer a combined space-time and a more whole and unified vision of the world, whether scientific or artistic.

Another example of that tendency is the fact that Joyce asked J.W.N. Sullivan to write an introduction to the 1929 publication of *Tales Told of Shem and Shaun*, a fragmentary book consisting of the three stories in which space-time is most concentrated: Professor Jones, the Mookse and Gripes, and the Ondt and the Gracehoper (Ellmann 614). This clear-cut attempt to coax one of the contributors to *The Enemy* to defect reveals not only the importance of ideas about science and humanism to the *Wake*, but the rivalry of print culture networks in

disseminating and validating such ideas. Sullivan declined Joyce's offer, but he did get another scientist, the linguist C.K. Ogden, to write the introduction.⁴⁵

Laurent Milesi has pointed out that Joyce wrote the title of Russell's *ABC of Relativity* next to its author's name on page 73 of the manuscript VI.B.19 (10n). Though Milesi does not do much to show how Joyce might have used Russell's popular book other than to align himself with Einstein against the attacks of Lewis, Jonathan Pickett's presentation at the 2009 North American James Joyce conference performed a brilliant reading of II.3 and III.4 along the lines of Freud and Russell. According to Pickett, Joyce combines one of Freud's case studies involving a patient whose neurosis derives from having witnessed the primal scene at a young age with the secret communication in Shaun's letter, both of which are catalyzed by Russell's discussion of the nature and speed of light in Einstein's relativity theories. Pickett notes that Joyce recorded on page 90 in VI.B.19, seventeen pages after noting Russell's *ABC of Relativity*, a footnote from Freud's "History of an Infantile Neurosis" that reads as follows: "These dreams represented the coitus scene as an event taking place between heavenly bodies." The primal scene in III.4 involves HCE and ALP as "heavenly bodies," HCE as the planet Jupiter and ALP as Europa, one of its satellites (582.28-583.25). The passage evokes many phrases from pages 61-3 in Russell, which explain the complicated notions of chronology and causality stemming from the constant speed of light in a vacuum. The passage from Russell makes the concepts concrete with examples referring to Jupiter, its moons, a hypothetical event E, and its transmission in all directions on a beam of light (62). Russell further explains the disparity of transmission rates and the role of observation in determining chronology by reference to

⁴⁵ Ogden also translated parts of the *Wake* into Basic English.

newspapers and telegraphs that spread the signal of the same event. Pickett argues that Joyce also borrows that example by turning ALP's letter—a signal ostensibly in the print medium—into a “photoflash” of light—like an electronic telegraph or radio signal—that is picked up by the radio receiver in the pub in II.3, where Taff interprets it as a vision of an ejaculation that he had forgotten about, or repressed (349). Hence, ALP's letter carries a message about the sexual valences of the family, carried through the universe on a “photoflash” of light that occurred before the pub scene, even though it originates later in the book. This use of relativist space-time in the central theme of the psychosexual development of the family demonstrates the fundamental importance of Einstein to the content and structure of the *Wake*.

The centrality of print media formats to the dissemination of arguments about Einstein in modernist and mainstream networks is illustrated further by the publication in 1929 of the book *Our Exagmination Round his Factification for Incamination of Work In Progress*. Joyce, feeling that he was losing the audience garnered by *Ulysses*, decided to create a book of explanatory and critical essays about *Work In Progress*. The authors consisted of his good friends and colleagues who were helping him to write and conduct business, as well as several editors and contributors to *transition*, the journal dedicated to the serialization of *Work In Progress*. *Transition* also published Gertrude Stein and a number of other writers attacked by Lewis in *The Enemy*, and the two periodicals enjoyed several hostile exchanges. In that way, launching counterattacks in both the periodical and book cultures—as Lewis did—represents a comprehensive strategy on the part of Joyce and his colleagues to advocate not only *Work In Progress*, but a particular view of space-time and the humanistic crisis ultimately deriving from Einstein and the popularization industry.

Many of the pieces in *Our Exag* address the manner in which the *Wake* explores Einsteinian principles. Joyce himself admitted in a letter to Valery Larbaud of July 30, 1929, that he “did stand behind those twelve Marshals more or less directing them what lines of research to follow” (*Letters* I 283). A survey of the relevant essays will afford an even better glimpse into the meaning of the new physics in the *Wake* and in its discourse between modernist print culture and the science popularization industry.

Marcel Brion, in “The Idea of Time in the Work of James Joyce,” considers time the most fundamental and important aspect of the universe and human experience. An early moment of the piece implies that varying rates of time, and possibly varying types of time, form the structural core of the *Wake*.

The relations between human beings are those of time. All men are made similar by the near equal cadence of their heart-beats, but they are separated by the rhythms of their sensations or their thoughts. Only those walking at the same pace know each other.

The fourth dimension is actually the only one that matters. Space is nothing—it is reduced every day by mechanical means of communication—but consider two men seated side by side. They do not live in the same time. There is no possible communication between them. And it is often the tragedy of life to feel oneself only a few centimeters away from the beings among whom one lives, yet separated from them by all the infinity of time.

Time is not an abstract concept. On the contrary, it is perhaps the only reality in the world, the thing which is the most concrete. All the rest could only intervene in the form of its emanations. (25-6)

While this passage denies the importance of space in the *Wake*, it is interesting more for its illustration of the intensity and manner in which Joyce’s contemporaries experienced the time-space debate during the 1920s. Brion’s discussion of time here rings of Bergson’s *durée*, or psychologically experienced time. However, the concrete, personal time-angst that he sees in his contemporaries can hardly be said of the character-figures that populate the *Wake*. The *Wake*’s figures (HCE, ALP, Shaun, Shem, Issy, the Four Old Men, Kate, Sackerson, and also the maid) are the principles of various relationships occurring in the human subconscious, human history,

and the physical universe. For all the detail of the *Wake*, its real concrete subject is those relationships, which is what makes the novel paradoxically abstract. It is important to remember that Brion was writing about the drafts and early serial versions published in *transition* ten years before the book was complete. Nonetheless, the emphasis on the modern experience of time gives a strong sense of why and how a book like the *Wake* should appeal to its contemporaries.

Brion seems to equate subjective time and its variation between individuals with the theory of relativity. As Lewis so vehemently asserted in one of the passages quoted from *The Enemy*, this was a commonly made mistake at the time. However, people in that milieu thought seriously about relativity, its relation to art and literature, and what it says about humanity.

After attempting to explain relativity through the example of an animal that lives long and slow and an insect that lives short and fast, saying that the amount of things that happen in their lives remain roughly equal, Brion extends the analogy to humanity.

It is the same thing, all proportions retained, with men—some live at high speed, others at reduced speed; and they are separated, inexorably most often, by these different cadences.

We may thus account for the fact that eighteen hours of Bloom's life should give birth to *Ulysses*, and we can easily imagine that *Ulysses* might have been ten times as long, a hundred times as long, extended to infinity, that one of Bloom's minutes might have filled a library. This is the mystery of the relativity of time. (28)

While this comparison does not consider factors of physical observation, such as the velocity of a frame of reference relative to the body under observation, it does bring the discussion to the level of construction in fiction, which creates a world that operates by the same laws and principles as reality but configured differently. Since there are references to real events, it has the effect of speeding up or slowing down time when two or more such instances are presented in the same narrative moment. This blending is more pertinent to the theory of relativity in that it forms the event structure of the *Wake*, not just the subjective relativity of the figures, of

which we do not see much. We get plenty of speech—as in the many quarrels between Shaun and Shem, Issy’s naughty remarks and songs, the testimony of HCE’s pubgoers, and the accusations of the Four Old Men—but the only direct presentation subjectivity is ALP’s monologue that constitutes book 4. Brion seems to value individuality in a way that the *Wake* does not provide, or rather, deliberately undermines.

Brion makes another explicit comparison between *Ulysses* and relativity theory, though it seems rather incorrect.

To reduce the decades of the *Iliad*, the *Odyssey*, of Telemachus to eighteen hours in the life of a man—and of an ordinary man to whom nothing happens save the most ordinary events of existence—is one of the Einsteinian miracles of the relativity of time. And we understand it even better when we see the movement of the vibrations transformed in each chapter, changing rhythm and tempo, slowing up in the Nausicaa episode, blowing like the wind in that of Eolus, giving spacious and deep cadences to the gynecological discussion. (30)

To imply that *Ulysses* is relativistic merely because the chapters have different rhythms is not necessarily correct. The movements of a musical composition can have different tempos, cadences, and rhythms, and when they do we do not call them relativistic. Music, like a narrative text, is a serial progression.

Indeed, narrative elements that coincide—however those elements might be construed—and that do so according to different temporal rates *might* qualify as relativistic if they occur simultaneously. Whitworth refers to such a phenomenon as heterochronicity and considers it a defining element of a relativist narrative. What is interesting here in the context of modernism is the notion of recurring ancient time by means of the mythic method: the episodes of the *Odyssey* recur in altered form and scale in *Ulysses*; the episodes of nearly all of history and literature find their way “pellmell” into the *Wake*; *The Waste Land* is a fragmented pastiche of Western Civilization; even Virginia Woolf’s novel *The Waves* (1931) recycles Aristotle and Plato

through the egotistical fantasies of the character Louis. Taken together, these examples impart a sense of the long, slow influence of the Classics, of ancient civilization upon modernity. One thing to be noted in the passage above, though, is that Brion sees an uneven time-aesthetic in the work of Joyce, which he sees also in relativity theory, and which together show modernism and science producing a similar effect on a contemporary of Joyce.

Brion goes on to describe *Work in Progress* as the creation of a universe, which constitutes a response to the notion expressed by Marsden, Sullivan, and Lewis that art and science are different aspects of the same project.

This chaos is the condition necessary to all creation. The cards are shuffled to begin a new game and all the elements of a universe are mingled before a new world is made, in order that new forms may be given birth. A total refutation of man and his milieu, a rejection of combinations already used, a need of fine new instruments. Joyce dashes the scenes of the world down pellmell to find an unhackneyed meaning and a law that is not outdated in the arrangement he is afterward to give them. To do this it is fitting that he should at the outset break through the too-narrow restraints of time and space; he must have an individual conception of these dimensions and adopt them to the necessities of his creation. In *Ulysses*, and still more in *Work in Progress*, we seem to be present at the birth of a world. In this apparent chaos we are conscious of a creative purpose, constructive and architectural, which has razed every conventional dimension, concept and vocabulary, and selected from their scattered material the elements of a new structure. (29)

The book-as-world metaphor is interesting in that the *Wake* lauds the fall of Newton's rational physics and the succession of Einstein's. Again, the narrative is being compared to a structure with laws, albeit ones that do not necessarily correspond to those of the real world, and there is an implicit comparison of Joyce's missions with Einstein's. He seems to imply a similar spirit in modernist writing and the new physics.

A passage near the end of Brion's essay describes the effect of the *Wake* in terms of relativity, which is very significant. This is in my opinion a much more valid exposition of relativistic elements "in" a work of fiction. Quoting Elliot Paul's piece appearing in this same volume, Brion says the following.

“Noah, Premier Gladstone and ‘Papa’ Browning are telescoped into one”. This image is perfectly accurate, and the optics of the work are so much the less accessible to the average reader as he does not always distinguish the moment in which the present episode is placed. When we are made to pass, without any transition other than an extremely subtle association of ideas, from Original Sin to the Wellington Monument and when we are transported from the Garden of Eden to the Waterloo battlefield we have the impression of crossing a quantity of intermediary planes at full speed. Sometimes it even seems that the planes exist simultaneously in the same place and are multiplied like so many “over-impressions”. These planes, which are separated, become remote and are suddenly reunited and sometimes evoke a sort of accordion where they are fitted exactly, one into another like the parts of a telescope, to return to Mr. Elliot Paul’s metaphor.

It has often been said that a man going away from the earth at the speed of light would by this act relive in an extraordinarily short time all the events in the world’s history. Supposing this speed were still greater and near to infinity—all these events would flash out simultaneously. This is what happens sometimes in Joyce. Without apparent transition, the Fall of the Angels is transparently drawn over the Battle of Waterloo. This appears to us as contrary neither to the laws of logic nor to those of nature, for these “bridges” are joined with a marvellous sense of the association of ideas. New associations, created by him with amazing refinement, they cooperate in creating this universe, the Joycian world, which obeys its own laws and appears to be liberated from the customary physical restraints. (32-3)

The emphasis on planes, an accordion-like universe, and multiple over-impressions all derive from the new physics, with its basis in Riemannian geometry. Also, the sense of being transported instantly from one place to another by some very subtle association of ideas is reminiscent of the triggering mechanisms for the intrusions in “Wandering Rocks.” However, the arbitrary nature of associations means that Joyce is using just those elements of relativity that suit his artistic purpose. Equally important with the interest of Joyce’s contemporaries in relativity is their interest in narrative as a law-driven analog to reality, albeit one with its own rules. In that way, *Work In Progress* shares in common with other books of the period that are based on systemic schemata both a theoretical architecture and a unique set of rules. Brion finally offers that it is not the the language of *Work In Progress* that readers find difficult, but its treatment of time and space: “if the books of Joyce are as difficult for many to read as those of Einstein it is perhaps because both of these men have discovered a new aspect of the world and one which cannot be comprehended without a veritable initiation” (33).

Elliot Paul begins his chapter of *Our Exag*, “Mr. Joyce’s Treatment of Plot,” by acknowledging that the philological aspects of the *Work In Progress* have so far been the primary critical focus because only some parts have been published in *transition*. There had not hitherto seemed to be any plot, he says, but he is now in a position to start assessing it (131).

Paul proceeds into a deft analysis of the narrative that puts it in a larger picture and teases out some fascinating details.

Many indications aside from the fact that the book begins in the middle of a sentence point out that its design is circular, without the beginning, middle and ending prescribed for chronological narratives. The idea of past, present and future must be laid aside, if one is to grasp the composition.

This is not impossible, given the slightest familiarity with modern developments in physics or mathematics or even a moderate appreciation of recent tendencies in painting. If once can consider all events as having a standing regardless of date, that the happenings of all the years are taken from their place on the shelf and arranged, not in numerical order, but according to a design dictated by the mind of Joyce, then the text is not nearly so puzzling. For example, if Noah, Premier Gladstone and “Papa” Browning are telescoped into one, because of common characteristics, no violence is done to logic. (132)

This passage continues several trains of thought about science and the novel with which Joyce first came into contact in *The Egoist*. The praise for the narrative as having no beginning, middle, and end, and also the exhortation to relinquish the idea of past, present, and future are direct continuations of the discourse about novelistic form and scientific liberation that began in Dora Marsden's articles and May Sinclair's criticism of Dorothy Richardson. Also, the notion that Joyce removes the time sequence frequently gets associated with Einstein in criticism, as we will see shortly in the writings and BBC broadcasts of Harold Nicolson. Paul's statement that we may consider any event as having a “standing” irrespective of date is a direct application of the relativity theories, which conclude that there is no absolute time or chronology in the universe, and that this constitutes no violation of logic. In that way, Paul uses relativity to espouse the attitude that any element of the composition can be arranged as

desired by the artist, without regard to “old logic” or traditional realism (serial plot, fidelity to nature), because individual components have a significance that does not depend on such structures. *Work In Progress*, like the mythic method of *Ulysses*, expresses archetypal human truths by means of a new arrangement of cultural materials (the Western tradition), and the relativity theories are instrumental in the design of both novels.

Paul then moves to space, and the exposition presents the Wakean world in astrophysical terms.

The treatment of space is equally elastic. Phoenix Park, Dublin, becomes interchangeable at one time with the Garden of Eden, again with the Biblical universe. The Wellington monument and the surrounding drill-field contains the field of Waterloo, when the author is so minded. Mr. Joyce takes a point of view which commands all the seas and continents and the clouds enveloping the earth. (133)

Paul’s contribution to the discussion of physics in the *Wake* is important in that it also addresses space, unlike Brion’s, which falls so heavily on the “side” of time (almost the inverse of Shaun and, by extension, Wyndham Lewis). Einstein was one of the first scientists, if not *the* first scientist, to state that the universe is in a state of expansion. The notion of fluid space within the *Wake* is certainly in agreement with the new physics, specifically because each location is always interchangeable with several times, as when Phoenix Park becomes interchangeable with the Garden of Eden. The telescoping and imposition of two such distantly located points in space might imply that the *Wake* has a spatial atmosphere with the ability to curve (the novel is cyclical, after all), which Einstein says is the natural shape of the universe.

I will add that besides the many references to Einstein, there are also many references to the nature of space that coincide neatly with his theory, and which are also associated with the Edenic narrative. For example, in the schoolroom scene of 2.2, the river/ALP explains to the children that the “garden of Idem,” though the primal origin, is still just as present as what we

know nowadays: the “solarsystemised, serialcosmically, in a more and more almightily expanding universe under one, there is rhymeless reason to believe, original sun” (263.20-1, 24-7). The connection of knowledge to the Fall of man (punned with “original sun”) and the state of the physical universe as given by Einsteinian physics (“almightily expanding universe”) is one of the most consistent motif-clusters throughout the *Wake*. The Edenic narrative is a thematic element that the *Wake* shares with nearly all British and American inter-war modernist novels, and which would be a strong unifying element for a larger study.

Back to *Our Exag*, John Rodker’s “Joyce & His Dynamic” addresses the manipulation and innovation of language, ending on a note largely in line with Brion and Paul that suggests a new-physical reading of the *Wake*.

As to its meaning?

As in the unconscious, in this new work there is no time. Events, people, make their own relevant conjunctions. Events are people too, a whole cosmographication of them. But the form is so elusive—alas where is our field of reference—and the associations often so personal to the author as to be incomprehensible to us that it seems half the matter is lost, as though indeed it were the inside of a pyramid which must always be hidden from us. (145)

Rodker points to the *Wake* here as a cosmos but also relates the timelessness to the unconscious dream-world. The latter does not imply the new physics as a model for the book’s construction, but it is one model alongside any number of others, which would be in keeping with Einsteinian mechanics. The effect on the reader of being “lost” in an incomprehensible universe is something of a paradox, since the *Wake* is not realistic in the traditional literary sense, yet it incorporates the concepts of disciplines whose aim is the accurate description of reality. Carl Frey Constein puts it well when he states that

[t]he lay person... continues to think in terms of medium-sized phenomena. His point of view is naive as compared to the view of science in which everything is altered beyond recognition.... (15)

Implicit in this statement is the fact that modern atomic and astrophysical theories posit a world that does not correspond to everyday experience or common sense but is real nonetheless. It is that reality, obscured from common observer, that Joyce sought to bring out through his art.

Popular Science, Modernist Literature, and Readerships

While the immediate context of Joyce's publication network was steeped in the concepts and political dimensions of the relativity theories, Einstein was a significant figure in the wider literary realm. Many critics outside of Joyce's circle perceived aspects of *Work In Progress* and *Ulysses* in terms of the relativity theories, however they were (mis)understood. These provide a window into the breadth of the connection between mainstream literary criticism, the science popularization industry, and the avant-garde writing of authors such as Joyce.

Carola Giedion-Welcker, a critic and friend of Joyce, published an essay about *Ulysses* in a 1928 issue of *Neue Schweizer Rundschau* that picks up the discourse of science normally applied to *Work In Progress*. The essay discusses space and time as the unifying frame in which all of the humanistic elements are cast in the novel.

Space and Time: The two great containers of reality, space and time, envelop and bear the entire mass of the novel. According to Bergson, the living-spiritual and intuitive world is placed above the mathematical-physical world of matter, of space; one can comprehend this through analysis. Above the scientific method stands the metaphysical, which points to everything living-dynamic. The work of the reconstruction of the space-time problem is a phenomenon within modern sciences and art. Within the literary, Bontempelli, the founder of the Italo-European *Novecento*, thinks it is 'the task of the twentieth century to build anew on these basic foundations.' George Antheil, the inaugurator of mechanical music, believes that the most important aim of the music of the future is the conscious penetration of the music-space with time; the 'abstraction in the time-space, the new and true dimension of music.' Programmatically, for the pictorial art, it says in 1920, in the realistic manifest of Gabo, 'To realize our world-experience in the form of space and time, this is the only goal of our creative art.' (Deming 441-2)

In direct fulfillment of the pre-war and wartime discourses in *The Egoist* and *The Little Review*, Giedion-Welcker explicitly associates the novel genre with the exploration of space and time, as well as the renovation of civilization. She goes further by claiming art and science to be on the same project of reconstructing space-time, in other words that the novel is a viable mode of theory. In that way, her thought, like that of Sullivan and Lewis, is continuous with pre-war and wartime discourse of the novel as a scientific genre.

After discussing the manner in which Joyce breaks up and destroys the literary tradition through his parodic sequences in "Oxen of the Sun," Giedion-Welcker explains how the end result is synthetic in an Einsteinian manner.

But even with this, the last saving formula for Joyce has not been found; while the irrational world of fantasy is dominating, Joyce interuses his poetic work with an exact, technically mathematical framework, and X-rays his world with a scientific coldness and sharpness. A synthesis of art and technique. The material is analyzed up to the last. A pondering and relating of all contents of the novel, forward and backward, from part to part, up to the technique of sentence structure, where, through refrain-like repetition and correspondence, the inner-relations are revealed. To transfer this to the musical: a mirror-fugue, through which one can go from the front to the back and from the back to the front. The arguments between man and world, the spiritual core of all great novels, becomes in Joyce, a great poetic-philosophical revelation about the inner and outer world, about subject and object, about matter, space, and time. They are the problems of the present philosophical and physical theories. Behind all this stands a deeply pessimistic anarchism, which crystallizes in Stephen's exclamation, 'Lord, help my unbelief.'

We stand in front of a similar picture of the world, as T. S. Eliot, the English contemporary of Joyce, forms in his *Wasteland*: tragic discrepancy of a transition-time, which, claimed by the past and by the future, ripens to a new synthesis under the pressure of historical burden. (Deming 443)

Giedion-Welcker's criticism of *Ulysses* in this passage continues discourses from *The Egoist* and *The Little Review* that praise the novel's generic properties of synthesis, of the scientific revelation of reality, and of the artistic revelation of the fundamental principles of humanity. She is also in agreement, whether consciously or not, with Sullivan and Lewis in claiming that literature, philosophy, mathematics, and science all reveal different aspects of the same reality, and that the novel synthesizes these disciplines into a whole and unified work. Implicit in Giedion-

Welcker's argument, therefore, is the notion that the novel is not just a literary form, but something else.

This train of thought represents the logical extreme of the arguments about the Flaubertian realist novel that began before the war with Pound and other contributors to the British avant-garde magazines. It also addresses the modern crisis of unbelief and how science and art are trying to remedy it through the same aims, namely the therapeutic function of the Edenic theme (the re-composition of the inner and outer world) through a new synthesis of art and science. It even acknowledges the “historical burden” that acts as agent and stimulus for all of this artistic and scientific experimentation: the aftermath of the Great War and the crisis of modernity that preceded and followed it.

Another article in *transition*, Ernst R. Curtius' “Technique and Thematic Development of James Joyce,” June 1929, constitutes a lengthy analysis of the technical and thematic development leading through all of Joyce's works to *Ulysses*.⁴⁶ Curtius states that “Joyce wants to present an integral reproduction of human experience (external and inner experience)” (Deming 466), thereby praising the novel genre's synthetic realism. The article then discusses the “relativation” of *Ulysses*, seeing it as an overarching aesthetic pattern in which the whole work must be understood.

The icy coolness of the pure spirit surrounds Stephen like an impenetrable aura. His thinking transcends earth-bound reality in every direction. He would like to shake off history like a nightmare.... He broods over metaphysics of the possible which did not become real (pp. 26, 186, 372, 402). He meditates about the collapse of time and space (pp. 24, 542), and about the mutual relations of these two systems of order (pp. 37, 209).

The revelation of all organized orders is perhaps the most comprehensive intellectual perspective in which we might consider Joyce's work. Relativity of time and space, of the actual and the potential, personality, sexuality, life and death. It is only from out of this ideology that Joyce could compose the Walpurgis-night of the 15th chapter, in which inorganic things speak,

46 Originally published in *Neue Schweizer Rundschau*, January 1929. Also appeared as *James Joyce und sein Ulysses* (1929).

in there appear dead men or absent persons, in which animal and human forms, male and female figures are metamorphosed. But also the symbolism of the parodies, in fact really the entire composition of *Ulysses*, rests upon an esthetic relativism. (Deming 468)

In this article, relativity is not understood in the strict Einsteinian sense; it appears rather as a sort of pop culture “relativism.” However, it is used as a metaphorical model to explain the thematic and formal dynamics of *Ulysses* and is also associated synthetically with other humanistic topics. Between Lewis' diatribes in *The Enemy*, the counterattacks in *transition*, and now these articles from a Swiss literary magazine, it is clear that in 1928 and 1929, in a widespread geographical network, the novel's generic properties of integrity and wholeness were being compared to relativity theory.

In the April 1929 issue of *Life and Letters*, Cyril Connolly's “The Position of Joyce” reviews the fragmentary publication of *Anna Livia Plurabelle*, referring to Einstein and his popularization in conjunction with the “incomprehensibility” of modern literature.⁴⁷ The article finds continuity between *Ulysses* and *Work In Progress* in their strange languages. Yet, for all this article's conservatism, it is nonetheless open to the “new literature.”

There is nothing insane in its conception nor bogus in its execution. Though to many a spinster fancy it probably will continue to lack the ‘note for which we will be listening soon’, to others, it promises amusement and a very interesting and strange approach to life and beauty. After all, it is an experiment; we are content to accord the wildest tolerance to the latest unintelligible—even uncommercial—pamphlet of Einstein—can we not admit a little of the same tolerance to something in writing we do not understand? It must be remembered that Joyce, besides being a lover of words, is an Irishman under no obligation whatever to rest content with the English language, and also that, while our Literature, unaware of a decline of the West or a defence of it, grows daily more bucolic and conservative, Continental Letters are nourished on an exhilarating sense of an uncertain future which makes the liberties of their volcano dwellers permissible—and which we are entirely without. Literature is in essence a series of new universes enforced on a tardy public by their creators. This one may be a fake, but it is not from a writer who has previously given us fakes; it may be a failure, but it is surely an absorbing one, and more important than any contemporary successes. (Deming 403)

In this passage, Connolly positions himself in the intellectual audience, which may not be as specialized as that of the modernist writers—rather a sort of generalist elite—but certainly

⁴⁷ Also appeared in his *The Condemned Playground* (1946): 1-15.

above “the public.” It is rare for a contributor to a mainstream literary magazine to express an openness to experimental literature, and all the more remarkable that the model of acceptance is the public consumption of pamphlets popularizing Einstein. The notion of experiment and revolution is also tied to nationality and national integrity: Joyce's Irishness releases him from the ethical responsibility of furthering traditional English. This notion is further connected to a liberating sense of uncertainty in both the state of civilization and the unrealized ramifications of the relativity theories, an attitude more in line with the pre-war *Egoist*, as seen in chapter 2 of this dissertation. It also gets to the question of genre by considering literature “in essence a series of new universes”—the question of the book as a self-contained autonomy that analogically relates to the real universe. In that way, Connolly's review is very aware of the variety of print culture formats in which popular science and avant-garde literature are disseminated. That he positions himself above the reader indicates a public taste for the popularization of modernist literature as well as the new physics. After all, the piece is called “The Position of Joyce,” and Connolly's democratizing of avant-garde literature is exactly the sort of practice that Lewis attacked in *The Enemy*.

Harry Crosby's defense of *Work In Progress* in the June 1929 number of *transition* constitutes an answer to Max Eastman's “The Cult of Unintelligibility.”⁴⁸ Crosby, writing in the modernist and specialized *transition* (at this time basically a vehicle for Joyce), identifies the positioning of Eastman's article alongside a conservative or reactionary public that is hostile toward avant-garde literature.

... ∴ Mr. Eastman=Public Opinion. And as Public Opinion despairs, so Mr. Eastman despairs because he finds Crane and Cummings and Joyce unfriendly. He feels they are uncommunicative. He begrudges the fact that they only incidentally allow one to look on not

48 *Harper's Magazine* clviii (April 1929): 632-639.

realizing the privilege of being allowed to look on with Crane or Cummings or Joyce. (490)

The implication is that more courage and a pioneering spirit (i.e. stronger character) are required in order to approach the advanced work of these writers.

The next paragraph expresses devotion to Joyce and compares him to Einstein, but also concatenates the issues surrounding the novel and relativity.

Let us now pour Irish Whiskey into our glasses and begin by agreeing with Mr. Eastman about James Joyce: that Joyce not only polishes the words which he sets in a row but moulds them and fires them in his own oven; that from free grammar Joyce, who is equipped for creative etymology as few men ever were, has taken a further step to free etymology; that Joyce has a prodigiously fine ear and a fine sense of humor. But when Mr. Eastman contends that Joyce speaks a private language whose meaning cannot be conveyed to the reader, when he contends that the literary form of Joyce's *Work in Progress* finds its parallel in the madhouse, and when he contends that the only thing the reader can experience with Joyce is a kind of elementary tongue dance, I cry NO. The fact that a Stuart Gilbert, a Rodker, a McAlmon, a MacLeish, a Jolas can follow with intense pleasure the footprints of Joyce's brain along the path of the ecliptic through the thunderclap, beyond the marriage according to auspices, beyond the burial of the dead, into a divine providence (I refer to the four cardinal points of the book) is sufficient justification, if a justification were necessary, of this Work and of its Sanity. Are there as many men can follow Einstein? But because only a handful can follow him should this detract one iota from his achievement? Ask not the Eagle to descend to the crow but let us train ourselves to become eagles. Let us spread new wings as if for flight.... (Deming 491)

The art of Joyce's language and its creative/associative etymology are put on a par with the theory of relativity, in terms of both their function and importance. Also associated with relativity is the notion of unintelligibility (for the popular audience, anyway), which Crosby counters by saying in fact it is intelligible to some, the elite or specialized. When he names Gilbert and other contributors to *Our Exag*, and asks whether there are as many men who can follow Einstein, the implication seems to be that Joyce is more intelligible and "friendly" than Einstein but, like Einstein, does not make his achievement any less noteworthy or important. While the attitude of *transition* towards its audience is one of condescension, it also seeks to uplift that audience to a more elite position. This can be contrasted with *The Enemy*, which has no such positive program.

Another article by Carola Giedion-Welcker, “Ein Sprachliches Experiment von James Joyce” in the September 1929 number of *Neue Schweizer Rundschau*, appeared around the same time as *Our Exag* and stresses the generic unity of *Work In Progress*.⁴⁹ Much of the article deals with Joyce's merging of space and time in order to achieve the novel's multiple unifying effects. She initially focuses on Vico but then switches to the new physics in a discussion of generic form and leitmotif.

Historic, legendary, biblical situation [sic] surge up. Continuous leitmotives: power, fall, love, death, sleep, nutrition, fight and quiet are not, as in *Ulysses*, compressed into a closed frame: a day in Dublin; so and so many persons acting on that day, with their associative circles backward and forward; thus after all a basis, a time-space development. But here: ever recurring ideas dipped into eternally changing, changeable husks, and projected into an absolutely unreal sphere. An all-time, an all-space, a logical *unanimism*. With giant boots Joyce strides countries, through centuries, through intellectual dimensions.... (Deming 496-7)

Given that Giedion-Welcker was a close associate of Joyce and that this article was translated by Jolas, it is very possible that Joyce “guided her research,” as he did the contributors to *Our Exag*, in response to Wyndham Lewis' attacks that his flowing time-aesthetic was weak and not virile. Her discussion turns to virility and renovation, from the image of Joyce in jackboots to a couple of moments later, where she says that “Man represents in the world the principle of power,” and that the “complementary color to the massive-heroic type of virility (deep blue) a feminine fluid serpentines under numberless names and shades through the book” (Deming 497). She thereby connects the nature of his linguistic experiment with that of the relativity theories in the way they collapse time and space, and also in their apparent virility.

Henri Fluchère's article “*Ulysse*,” appearing in the May 1931 *Le Foyer Universitaire*, discusses the novel genre as part of a general appreciation of *Ulysses* and a description of its content and methods.

⁴⁹ Also appeared in *transition* 19-20 (June 1930): 174-83, translated by Eugène Jolas. Later appeared in *In Memoriam James Joyce* (1941), ed. Carola Giedion-Welcker, pp. 37-49, and reprinted in Deming [present text].

Let us keep believing that *Ulysses* is a novel. It is a psychological development, a chronological analysis which wants to be exhaustive of the conscience of man, representing the normal man. Two points of view must be considered: as a document and as a work of art. I will, indeed, say 'work of art.' Because if the value (I was going to say scientific) of this work is not contested, it is its artistic value which is the object of the most vehement discussions and which, finally, will plead for or against it in the tribunal of the composite conscience of the public which judges as a last resort. (Deming 553)

In the tradition of the Flaubertian realist novel, Fluchère sees scientific value in *Ulysses* because it follows mimetic methods and a chronological structure. This is another aspect in which the novel genre and the generic properties of *Ulysses* are structurally and conceptually close to science.

The science popularization industry of the 1920s gave rise in the 1930s to a more general culture of making all kinds of advanced works “friendly” to mainstream educated audiences. A primary example of this phenomenon is the popularization of modernist literature by Harold Nicolson, the husband of Vita Sackville-West. Nicolson was a British diplomat and a well-known broadcaster on the BBC, whose talks on literature were published afterward in the radio company's magazine, *The Listener*. Nicolson's talk on Joyce was originally scheduled for November 1924 but, due to controversies surrounding the censorship of *Ulysses*, was delayed until November 27, 1931 and again, after further protests by Alfred Noyes, to December 6, 1931, with the provision that Nicolson could not mention *Ulysses* (Banta and Silverman 191, Deming 24). Joyce and Sylvia Beach were in direct contact with Nicolson, so they were all well aware of the political infighting surrounding the talk.

In a letter to Harriet Shaw Weaver of November 21, 1931, Joyce lists the time of Nicolson's talk and indicates that “[h]e has written a broadcast pamphlet in which he calls me 'the Einstein of English fiction'" (*Letters* III 234). A copy of that pamphlet, titled *The New Spirit in Literature: An Essay Introductory to Twelve Talks*, exists in the British Library, though unfortunately

the recording of the December 6 broadcast is no longer extant at the BBC Archives.

Nicolson's pamphlet is a treasure trove of insight into inter-war British print culture, especially the science and literature popularization industries. The first sections of the pamphlet are careful to define which audience is addressed, what kind of approach to literature will be taken by the essay and the ensuing broadcast, and what kinds of reading habits are necessary to engage with modernist literature. The pamphlet is aimed not at those fluent with Joyce, Woolf, Eliot, and Aldous Huxley, but at a “central or bull's-eye audience” of the intelligent person who is “anxious to grasp the spirit of his age, prepared for this purpose to undertake what is known as 'difficult' reading, and sufficiently interested in the subject to welcome some measure of guidance and suggestion” (4). The approach will not be high-brow or pedantic, as “[e]ducation-consciousness is becoming as damaging to the vitality of the nation as class-consciousness” (5). Consonant with this ethical responsibility will be to help people “understand the advanced spirit of their age” and to encourage them “to exploit, to cultivate, and to enrich those hours of leisure which they may be accorded” (6). The habit of reading required by this activity is to rise above the “buns and tea-cakes of light reading” because the experience of a modern literary book is that it is “an event of the mind” (10). In that way, Nicolson's treatment of modernist literature is similar to some of the popular reviews of Joyce quoted above, as well as Sullivan and the popular science industry. His talk is aimed at a generally educated, middle readership, as a democratizing gesture of lifting it up to appreciate the specialized literature that is inaccessible to them supposedly for reasons of class and education.

Nicolson then goes on to give an account of the British reading public since the

Eighteenth Century, providing a narrative of the modernist movement that is now familiar to us. During the discussion, he addresses the common sentiment of social disunity and suggests a new way of thinking about contemporary literature as a way of reconnecting the public with the advanced spirit of the age. He explains that a crucial difference for contemporary authors is that they “have no sense of any corporate, identifiable, or national audience: they write, as it were, either for themselves or for their personal friends: they thus take no account of the majority conventions of their contemporaries” (12). Nicolson acknowledges that these elements became present in the reactions of certain modern writers to the Victorian age, between about 1880 and 1914, but that those writers believed in themselves (21). Writers between 1918 and 1930, on the other hand, do not have that self confidence on account of the disillusionment in human progress, the failure of statesmanship, and the inability to cope with post-war reconstruction (21). Those events were compounded by certain intellectual developments such as the theories of the unconscious personality by Freud and Jung, as well as the fact that “the most stable rules of physics were cast in doubt by the researches of Einstein” (21). For all of the above reasons, Nicolson explains for the next two dozen pages that advanced modern writers do not instruct, but suggest; do not develop theories, but prefer facts and small insights; do not gravitate toward religious sentiment, but toward science and method.

After brief discussions of T.S. Eliot's *The Waste Land* and Virginia Woolf's *To the Lighthouse*, Nicolson indicates that he must say something about James Joyce. His remarks on Joyce are couched in a discussion of the novel generally. Nicolson explains that traditional novels are based on a sequence of events, a continuous progression of time, and successive developments in space and time (34). He claims that this is an invalid interpretation of life for

James Joyce, for whom the development of a novel should be organized not so much by events but by associations, a group of ideas evoked by a single experience (35). In that way, says Nicolson, Joyce tries to convey unexpressed vibrations of the past, the present, and the unrealized future: the present moment is the center of a circle, or several circles, of associated ideas becoming fainter as they radiate out (35).

Like some of the commentators quoted above, and like certain critics during the career of *The Egoist*, Nicolson sees the liberating possibilities of non-linear narrative and, like those critics, connects that concept with the novel's scientific orientation.

Obviously, it is difficult for any reader to follow with confidence the tremendous wave-lengths of Mr. Joyce. Equally obviously, his method is an innovation destructive of the time-sequence, which had hitherto formed the framework of the English novel. Joyce is the Einstein of English fiction. Hence his importance. Yet I do not contend that his works furnish very amenable reading. (35)

The rhetorical purposes of making such a close correlation between Joyce and Einstein are to back Joyce as a member of the advanced spirit of the age and to stress that his works are worth learning despite their difficulty. More specifically, he makes the argument to the public that the non-linear time of Joyce's novels attempts to reconstruct the actual mechanics of space-time, since according to Einstein there is no absolute chronology in the universe. Nicolson thereby complements and extends the discourse that art and science reveal different aspects of the same reality, which was such a prominent theme in both the popular science industry and in avant-garde magazines like *The Enemy* and *transition*. Nicolson continued his push to make Joyce “friendly” to popular audiences in the two *Listener* articles immediately following the December 6 broadcast.⁵⁰ However, Lewis would consider Nicolson's pre-packaging of literature for a mass

50 “The Significance of James Joyce,” *The Listener* (16 December 1931): 1062; “The Modernist Point of View,” *The Listener* (23 December 1931): 1108-9.

audience to be a grave offense.

Not all critics associating Joyce with Einstein were approving of the connection. In February 1934, Ronald Symond published a somewhat baffled article in the *London Mercury* about *Work In Progress* that equates Einsteinian space-time with chaos. Like many early reviewers of the *Work In Progress* fragments, Symond begins his discussion with the passage from the Mookse and the Gripes that refers to Einstein and takes the position of the “common reader.”

We have only to read the first sentence from one of the published extracts of this work, *The Mookse and the Gripes*, to realise that here is a voice utterly strange and unique: 'Eins within a space and a weary wide space it wast ere wohnd a Mookse.' What on earth is this?— asks the common reader; and he will have to keep his nose well down to the text to find an answer for himself. Critics, both English and foreign, have been at work on Mr. Joyce, but none of them can 'place' him. Whether they like his work or not, none can question his uniqueness. There is no possible placing of a composite Gilbert, Lewis Carroll, Rabelais, Dante, Bruno, Dean Swift, Coleridge, Freud and Vico, who combines this multiplicity of personality with a soft and subtle brogue as Irish as anything which ever came out of Dublin, a sublime indifference to time and space, and a habit of passing in and out of the dreamland of the subconscious as many times as his fancy may dictate. (Deming 605-6)

Despite his bafflement, Symond does recognize the unity of multiple influences that relate to “a sublime indifference to time and space,” though he ends up comparing its “chaos” to a crossword puzzle.

The characters of *Work in Progress*, in keeping with the space-time chaos in which they live, change identity at will. At one time they are persons, at another rivers or stones or trees, at another personifications of an idea, at another they are lost and hidden in the actual texture of the prose, with an ingenuity far surpassing that of crossword puzzles.... (Deming 606)

Perhaps the most appreciative review of *Finnegans Wake* came shortly after its publication in 1939. William Troy⁵¹ ties together Joyce's use of the Viconian stages of the history of humanity and civilization, as well as the technique of coalescence, in relation to Einstein's relativity. He describes the coalescence technique, in which different historical events, myths, personages or ideas merge through the use of puns and portmanteaux, stating that “[f]or the

51 Also appeared in *James Joyce: Two Decades of Criticism* (1948, 1963), ed. Seon Givens, pp. 302-18, and in William Troy: *Selected Essays* (1961), ed. Stanly Edgar Hyman, pp. 94-109.

origin and development of this particular method we can discover three distinct influences: Vico's theory of the flux and reflux of history, Jung's conception of the collective unconscious, and Einstein's theory of relativity" (706-7). The treatment of space-time and other literary elements in *Ulysses* and *Finnegans Wake* is connected to the discourse of the renewal of civilization, humanity, wholeness, and unity that has been such a prominent feature of literary culture since before the Great War.

Now the main difference between *Ulysses* and the present work is that where humanity is represented in the first by a 'coalescence' of universalized traits into a single figure existing in time and space, in the second these traits are diffused through time-space and coalesce finally only in the *pattern* of history. Humanity is impressive not in its actuality but in its immanence. And this becomes something comparable to the conception of the Divine Idea of the medieval theologians—that which is capable of taking on matter but is itself infinite in time and space....

What is being suggested is that Joyce in this new work, like Yeats and Mann, seeks his salvation not in any escape from the present but in a transcendence of the present through the past. And the question of his seriousness, which has bothered some people, will be solved if we consider the piety that is involved in the energetic and still uncorrupted affirmation of life that is implicit in every movement of his writing. This is the seriousness of the greatest comedy, which always keeps in recollection the tragic knowledge that is at its base. (Deming 707)

This passage thoroughly refutes Lewis' charges in *The Enemy* that Joyce's work bears no transcendence, and moreover identifies Einstein as an element in the space-time relationships of the language that helps to effect it.

In the Winter of 1940, John Peale Bishop published an article that, like Troy's, understands the transcendental use of space-time in the *Wake*. The review gives a brief treatment of the novel genre's basis in realism and how the realist element in the *Wake* is the most difficult to detect because of the complete break from the Flaubertian tradition. Bishop understands that the function of the language, and not just the narrative, has a basis in Einsteinian space-time. The essay ends with a consideration of technique and form that harkens back to the new physics and psychology:

And yet Joyce's form has served him well. For when we have come to the end of

Finnegans Wake, we know that here is the past and the future of mankind. It is a history which restores religion and accords with science. Indeed, for the first time a poet has created for us a world which outwardly agrees with contemporary physicists, as inwardly it confirms the psychologists of our time. (Deming 738)

In other words, Bishop argues that the *Wake* reintegrates science and religion, which, ironically, Lewis was calling for in *The Enemy*.

The late reviews of *Work In Progress* and early reviews of *Finnegans Wake* seem to grasp much better the ramifications of the Einsteinian element in Joyce's art. The unsigned obituary of Joyce that appeared in the *New Republic* during the early days of the Second World War is perhaps the most thorough synthesis of the novel, Einstein, the crisis of Western civilization, and the humanistic concerns that had merged therein since before the Great War.

He was the leading representative of our time, and perhaps in all times, of the theory of literature as a pure art almost completely divorced from society.

Literature as a pure art approaches the nature of a pure science. And Joyce was also the great research scientist of letters, handling words with the same freedom and originality that Einstein handles mathematical symbols. The sounds, patterns, roots and connotations of words interested him much more than their definite meanings. One might say that he invented a non-Euclidean geometry of language; and that he worked over it with doggedness and devotion, as if in a laboratory far removed from the noises of the street. This does not mean that he neglected to present human beings in his novels. Stephen Dedalus and his father, Leopold and Molly Bloom, even H. C. Earwicker of *Finnegans Wake*, are figures that will not be forgotten. But they are figures that are analysed exhaustively in repose rather than being presented in action. And the side of them that held Joyce's interest was their subconscious—that is, the side that medical scientists like to deal with. Moreover, even the strongest of his characters seem dwarfed by the great apparatus of learning that he brings to bear on them. They are almost like atoms being smashed by a 250-ton cyclotron.

These are some of the reasons why Joyce was not a writer of the same magnitude as Tolstoy or Stendhal or Dickens or any of the great men whose subject was human actions in their social background. In his own field, however, he was absolutely without an equal. There are very few serious novels of the last twenty years that do not show traces of his influence, even if only at third hand. The writers of the world owe him an enormous debt for making discoveries that have opened new horizons even to those who completely disagree with Joyce's idea of literature. They will miss him all the more because, in the hard years that lie ahead of us, it is doubtful whether any great scientist of letters will have the opportunity to carry on his work. Perhaps there will not even be neutral countries to which they can escape.... (Deming 747)

Conclusion

Einstein's relativity theories were not only intrinsically interesting to Joyce, but they became

the flashpoint for the artistic and humanistic crises of the print cultures in which *Finnegans Wake* emerged. We have seen that there were particular points at which Joyce developed *Work In Progress* in response to the emerging disagreements over the relationship between science and art. That relationship has different connotations in the mainstream print culture, where it is something remote that must be made friendly and reintroduced to the general public, and in the avant-garde culture, which performs a much more specialized application of the philosophical ramifications of relativity in the form of the novel. In that way, Einstein's relativity theories are fundamentally incorporated into the psychosexual development of the family in *Finnegans Wake*, where Shaun and Shem conjoin as space-time in order to begin the plot of the novel, and where ALP's letter is transmitted through the universe on a "photoflash" of light back to book II.3, as the children are killing HCE to ascend into sexual maturity and adulthood. Most likely, the theme of "killing the common man" derives in part from the fascist vitriol of central European politics, as well as the "hard" modernism of Lewis and Pound, both of which attacked the democratic tendencies of popular science and mainstream print culture. Einstein, for Joyce, therefore embodies the ideal of complete humanity, which embraces all aspects of space and time as these mediate the self and the family.

Conclusion

Einstein's relativity theories participated in the discourse of science and the novel in the immediate print culture that produced *Ulysses* and *Finnegans Wake*. Not only did aspects of the theories, such as multiple perspectives and the apparent idiosyncrasy of nature, appeal to Joyce's aesthetic aims, but they spoke to a broad swath of humanistic questions being considered with such urgency during and between the wars. In that way, the novel—and Joyce's novels in particular—as the embodiment of a whole society or the whole person, came to the forefront of literary innovation. The core theme of home or the return to origins that characterizes *Ulysses* and *Finnegans Wake* derives from the alienation of modernity, which has its counterpart in the theme of astronomic alienation, of human excommunication from the physical world we inhabit. The relativity theories offered Joyce, as a novelist, an opportunity to revisit and repair that alienation, which is why the Edenic motif is so strong in his final two works.

But Joyce was not alone among novelists of the early Twentieth Century in dealing with the place of humanity in the social and physical realms. Nor was he alone in expressing that conflict through the Edenic motif. Virginia Woolf's novels, especially *To the Lighthouse* and *The Waves*, incorporate the new physics in order to explore the relationship between modernity and the ancient past, between the disillusionment of modern England and the romantic myth of “England's green and pleasant land,” between humanity and nature. Similarly, William Faulkner's *The Sound and the Fury* and *Absalom, Absalom!* treat the Old South as a problematic paradise now lost, using Einsteinian space-time to create a narrative that explores the competing but true perspectives of that time and place. In my research, I have encountered

sources which claim that certain Harlem Renaissance writers, including Alain Locke and Zora Neale Hurston, kept abreast of relativity in British literary magazines available in New York. Thus, the methods employed here can be turned to these groups for a new study that will elucidate a wider view of modernism's relationship with the new physics, as well as its importance to the history of the novel. Finally, many novelists after 1945 referred to or incorporated the new physics more openly, even, than did Joyce. Another study of the Twentieth-Century novel would articulate the continuum of social and historical factors that characterize that development and provide some insight on the differences and similarities between modernism and post-modernism, if indeed they be separate movements.

Appendix: A Table of Joyce's Reading

This table contains information about items that Joyce read or might have read, culled from the published letters and biographies. The column headings—Item, Item Date, Doc Date, Document, Correspondent, Notes—indicate what Joyce read or might have read and where the information is found. An Item is the work that Joyce read or might have read. Item Date is the Item's initial publication date or, if known, the date of the edition Joyce read. The Document is the source listing the Item, while Doc Date is the Document's publication date. If the Document is a letter, the Correspondent column indicates the person to whom it was addressed or from whom it came. The Notes column indicates the relative likelihood or certainty that Joyce read the Item, as well as any other pertinent information.

Legend

Abbreviations for source Documents are as follows. Full citations can be found in the Bibliography.

Ellmann = Richard Ellmann's biography of James Joyce (1982 ed.)

Gheerbrant = Bernard Gheerbrant's *James Joyce: Sa Vie, Son Oeuvre, Son Rayonnement*

Gorman = Herbert Gorman's biography of James Joyce (1934 ed.)

JJ / Sylvia Beach = *James Joyce's Letters to Sylvia Beach*, ed. Melissa Banta and Oscar Silverman

Letters I, II, III = *The Letters of James Joyce Vols. 1-3*, ed. Stuart Gilbert and Richard Ellmann

Pound / Joyce = *The Letters of Ezra Pound to James Joyce*, ed. Forrest Read

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Portrait of a Lady</i>	April 1902	1939	Gorman (81)		Began to read Henry James and was vastly pleased with <i>Portrait of a Lady</i> . Saw Yeats's <i>Cathleen-ni-Houlihan</i> and A.E.'s <i>Deirdre</i> .
Ben Jonson, Aristotle	Winter 1902-3	1939	Gorman (94-5)		JJ read Jonson for meter and Aristotle for aesthetics, system, exactitude, the unities.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Picture of Dorian Gray</i>		08/19/06	Gorman (178)		Oscar Wilde. In Italian translation.
<i>The Lake</i>	late August 1906	1939	Gorman (179)		Play by George Moore
<i>Rosa Bernd</i>	early October 1906	1939	Gorman (180)		Play by Gerhart Hauptmann
<i>Demos: A Story of English Socialism</i>	November 1906	1939	Gorman (181)		George Gissing
<i>The Crown of Life</i>	November 1906	1939	Gorman (181)		George Gissing
<i>By the Stream of Killmeen</i>	November 1906	1939	Gorman (181)		Seumas O'Kelly
<i>Young Eugene</i>	November 1906	1939	Gorman (181)		Ferraro
<i>Short Stories</i>	November 1906	1939	Gorman (181)		Guy de Maupassant
Anatole France	November 1906	1939	Gorman (181)		Title?
Sermini	November 1906	1939	Gorman (181)		Title?
Doni	November 1906	1939	Gorman (181)		Title?
<i>Gelosia</i> , by Oriani		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Collected Works</i> , Henrik Ibsen		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>History of European Morals</i> , Lecky		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Of God and His Creatures</i> , Rieckby		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>I</i> , Berlitz		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Peer Gynt</i> (Vol. 4), Henrik Ibsen		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Chennavière</i> , Claude Debussy		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Major Barbara</i> , George Bernard Shaw		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Saint Antoine</i> , Flaubert		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Carmen</i> , Mérimé		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>The Egoist</i>	02/16/14	05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Engl. Grammatik</i> , Sauer		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Engl. Gramamtik, Schlüssel</i>		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>The Idiot, Dostoevsky</i>		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>L'Évolution créatrice, Bergson</i>		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Premières Œuvres (2 vols.), Flaubert</i>		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Smoke, Turgenev</i>		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Devil's Disciple</i> , George Bernard Shaw		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Anarchism</i> (trans. Byington), Eltzbacher		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>Pinocchio</i> , Collodi		05/09/14	Ellmann (779)		n. 30 ch. 23; Table of bill from bookseller F.H. Schimpff indicates JJ bought between 1 Oct 1913 and 9 May 1914
<i>The New Statesman</i>	06/27/14	1982	Ellmann (353)		Review of <i>Dubliners</i> by Gerald Gould, saw genius but sterile order; Ellmann mentions JJ always thanked reviewers, so can assume he read this.
<i>Il Piccolo</i> (della Sera?)	????	07/16/14	Pound / Joyce	From Ezra Pound	Thanks for, refs "I Vorticisti Sorpasano in Audacia I Futuristi: Versi da Una a Trecente Sillabe!"
<i>Corriere della Sera</i>		07/16/14	Pound / Joyce	From Ezra Pound	Wishes had seen (b/c Joyce did?)

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Egoist</i>	January 1915	1982	Ellman (400)		Received July 1915
<i>The New Age</i> XVI.17: 452	02/25/15		Pound / Joyce		Contains Ezra Pound's essay "On the Non-Existence of Ireland"
<i>The Smart Set</i>	May 1915	1982	Ellmann (384)		"The Boarding House" and "A Little Cloud" published in.
"Hebraism and Hellenism" by Arnold		06/30/15	Ellmann (395)	To Ezra Pound	Unpublished letter; made comments that suggest had Arnold's essay in mind.
<i>The Drama</i> VI.2	February 1915	09/12/15	Pound / Joyce	From Ezra Pound	Asks if read "Mr. James Joyce and the Modern Stage"; promises to send books and <i>Catholic Anthology 1914-15</i>
<i>Catholic Anthology 1914-15</i>		09/12/15	Pound / Joyce	From Ezra Pound	Promises to send
<i>The Egoist</i>	September 1915	1982	Ellmann (400)		
<i>The North American Review</i>		01/31/16	Pound / Joyce	From Ezra Pound	Suggests he try
<i>The Egoist</i> III.3	03/01/16	04/22/16	Letters II	To Harriet Shaw Weaver	Says read (HSW wrote lead article in "Views and Comments" section), also contains Ezra Pound's "Meditatio" on printing of Portrait in England.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Egoist</i>	April 1916	04/22/16	Letters II	To Harriet Shaw Weaver	Says read
<i>Joseph Vance</i>		08/16/16	Pound/Joyce (Ellmann 414-5)	From Ezra Pound	Began on 2nd volume by mistake
<i>Seven Arts</i>		09/01/16	Pound / Joyce	From Ezra Pound	Refs; Nov 1916-Oct 1917, when merged with <i>The Dial</i>
<i>The Quarterly Review</i> (London)	October 1916	12/20/16	Pound / Joyce	From Ezra Pound	Refs "drunken helot" comment in Arthur Waugh's "The New Poetry"
<i>The New Republic</i>		11/13/16	Pound / Joyce	From Ezra Pound	Refs, as refd by JJ
<i>The Times Literary Supplement</i>		03/01/17	Pound / Joyce	From Ezra Pound	Encloses; Portrait is only novel to get solo treatment, all others are lumped under "New Novels"
<i>The Nation</i>	02/24/17	03/03/17	Letters I	To H.G. Wells	Re: his reviews of <i>Portrait</i> .
<i>The New Republic</i>	03/10/17	03/03/17	Letters I	To H.G. Wells	Re: his reviews of <i>Portrait</i> .
<i>The Nation</i> (London)	02/24/17	03/14/17	Letters II	Harriet Shaw Weaver to B.W. Heusch	Tells about reviews of <i>Portrait</i> by H.G. Wells in.
<i>The New Republic</i>	03/10/1917 X.123	03/14/17	Letters II	Harriet Shaw Weaver to B.W. Heusch	Tells about reviews of <i>Portrait</i> by H.G. Wells in: 158-60
<i>The Times Literary Supplement</i>	03/01/1917 XVI	03/14/17	Letters II	Harriet Shaw Weaver to B.W. Heusch	Unsigned article by Arthur Clutton-Brock - "Wild Youth"
<i>New Ireland</i>	03/03/17	03/15/17	Letters II	To Ernest Boyd	Thanks for kind review of <i>Portrait</i>

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Egoist</i>	March 1917	1982	Ellmann (414)		Dora Marsden wrote positive review of <i>Portrait</i> in.
<i>The New Republic</i>	April ? 1917		Pound / Joyce		Quinn enraged by Hackett's review of <i>Portrait</i> , "Green Sickness"
<i>The New Statesman</i>		04/09/17	Letters I	To Ezra Pound	Looked for review of <i>Portrait</i>
<i>New York Sun</i>		04/09/17	Letters I	To Ezra Pound	Ernest Boyd sent review of <i>Portrait</i> by James Huneker
<i>The London Times</i>		04/09/17	Letters I	To Ezra Pound	Saw Review of <i>Portrait</i>
<i>The Manchester Guardian</i>	03/13/17	04/09/17	Letters I	To Ezra Pound	Saw Review of <i>Portrait</i>
<i>The Egoist</i>		04/09/17	Letters I	To Ezra Pound	Saw Review of <i>Portrait</i>
<i>Vanity Fair</i>	May 1917 8.3	04/22/17	Letters II	To James B. Pinker	John Quinn wrote long laudatory article on <i>Portrait</i> in, "James Joyce, a New Irish Novelist"
<i>The New Statesman</i>	04/14/17	04/25/17	Letters II	To J.C. Squire	Thanks for review of <i>Portrait</i> .
<i>The Egoist</i>	01/15/14	04/30/17	Letters II	Nora Barnacle Joyce to John Quinn	Pound wrote of destruction of <i>Dubliners</i> in.
<i>The Times Literary Supplement</i> 4.5: 8-16	September 1917	10/22/17	Letters III Appendix	To Ezra Pound	Thanks for copies, with "highspirited lines"
<i>Prufrock and Other Observations</i> by TSE		10/22/17	Letters III Appendix	To Ezra Pound	Got today

Item	Item Date	Doc Date	Document	Correspondent	Notes
The Rainbow by D. H. Lawrence	1915	06/09/18	Letters I (114-15)	To James B. Pinker	Requests copy
<i>The Voyage Out</i> by Virginia Woolf	1915	07/29/18	Letters I	To Harriet Shaw Weaver	About to read; asks her to send thanks for Woolf's interest in the printing of <i>Ulysses</i> .
<i>Tarr</i> by Wyndham Lewis	1918	07/29/18	Letters I	To Harriet Shaw Weaver	Received copy that evening
<i>Il Secolo</i>	July 1918 (?)	07/29/18	Letters I	To Harriet Shaw Weaver	
<i>Nuova Antologia</i>	07/15/18	07/29/18	Letters I	To Harriet Shaw Weaver	
<i>The Future</i> II.6: 161-3	May 1918		Pound / Joyce		Contains Ezra Pound's essay "Joyce"
<i>Umana</i>	07/06/18	1982	Ellmann (443)		Silvio Benco wrote positive review of <i>Exiles</i> in
<i>The Times Literary Supplement</i>	07/25/18	08/21/18	Letters II	To James B. Pinker	Refs Clutton-Brock's review of <i>Exiles</i> in
<i>The New Statesman</i>	09/21/18	1982	Ellmann (443)		Desmond McCarthy wrote positive review of <i>Exiles</i> in
<i>The New Statesman</i>		10/26/18	Letters I	To Harriet Shaw Weaver	Saw review of <i>Exiles</i> .
<i>The London Times</i>		10/26/18	Letters I	To Harriet Shaw Weaver	Saw review of <i>Exiles</i> .
<i>Nuova Antologia</i>		10/26/18	Letters I	To Harriet Shaw Weaver	Vidacovich's review of <i>Exiles</i> not yet appeared in.
<i>Mercure de France</i>		10/26/18	Letters I	To Harriet Shaw Weaver	Mr. Davray's review of <i>Exiles</i> not yet appeared in
<i>The Little Review</i>	09/01/18	10/26/18	Letters I	To Harriet Shaw Weaver	Not received yet from Pound

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Little Review</i>	10/01/18	10/26/18	Letters I	To Harriet Shaw Weaver	Not received yet from Pound
<i>The Future</i> II.11 (Nov 1918): 287			Pound / Joyce		Contains Ezra Pound's essay "A Serious Play"
<i>Mercure de France</i>	02/01/1919 CXXXI 495	06/17/19	Letters II	To Henry Davrey	Thanks for positive article in
<i>The Athenaeum</i>	07/04/19	1982	Ellmann (442)		T.S. Eliot wrote article comparing Yeats' recent book to later work of Joyce
<i>Münchner Neueste Nachrichten</i>	08/08/19	1982	Ellmann (462)		Review of <i>Exiles</i> ending w/qstn "All that noise for an Irish stew?"
<i>München Augsburgische Abendzeitung</i>	08/08/19	1982	Ellmann (462)		Review of <i>Exiles</i>
<i>Berliner Tageblatt</i>	08/08/19	1982	Ellmann (462)		Review of <i>Exiles</i>
<i>Neue Freie Presse</i>	08/08/19	1982	Ellmann (462)		Review of <i>Exiles</i>
<i>A History of English Prose Rhythm</i> , by Saintsbury		March 1920	Ellmann (475)		Studied while composing "Oxen of the Sun"
<i>Reynold's News</i>		06/17/20	Letters II	To Mrs. William Murray (aunt Josephine)	Asks for weeks' end copies of
<i>Lloyd's Weekly News</i>		06/17/20	Letters II	To Mrs. William Murray (aunt Josephine)	Asks for weeks' end copies of
<i>News of the World</i>		06/17/20	Letters II	To Mrs. William Murray (aunt Josephine)	Asks for weeks' end copies of
<i>Riders to the Sea</i>		07/12/20	Ellmann (489)		Borrowed from Sylvia Beach's lending library

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Dublin Review</i>	Jan-Feb-March 1920 CCM: 135-8	08/16/20	Letters III	To Harriet Shaw Weaver	Thanks for copy, containing review of <i>Portrait</i> in "Some Recent Books"
<i>Hymns</i>	1920	09/13/20	Letters III	To John Rodker	Thanks for copy, which he read. Contains "Hymn of Hymns" with cosmic theme.
<i>The Little Review</i>	1917 (?) - 1920 (?)	09/29/20	Letters III	To John Rodker	Asks for copies containing his novel. Own copies were in a case sent from Trieste, now lost. Asks if any number has appeared since the May-June 1920 issue.
<i>The Little Review</i>	Sep-Oct 1919	11/10/20	Letters III	To John Rodker	Asks for copy.
<i>Instigations</i> , by Ezra Pound	1920	1990	JJ / Sylvia Beach		Ezra Pound compares <i>Ulysses</i> to Flaubert's <i>Bouvard et Pécuchet</i>
<i>The Dial</i>	Oct 1920 LXIX.7	11/16/20	Letters III	To Harriet Shaw Weaver	Sends copy, containing Evelyn Scott's "A Contemporary of the Future" re: <i>Ulysses</i>
<i>Reynold's News</i>	05/29/20	Nov 1920	Letters III	To Frank Budgen	Asks for copy re: lawsuit over "Nausikaa"
<i>News of the World</i>	06/05/20	Nov 1920	Letters III	To Frank Budgen	Asks for copy re: lawsuit over "Nausikaa"

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<i>The Egoist</i>	01/15/14	11/29/20	Letters III	To Mme Yasushi Tanaka	Tells to write Fritz Vanderpyl for copy, containing whole story of Dubliners.
<i>The Little Review</i>	No. containing "Oxen" (look up)	12/09/20	Letters III	To John Rodker	Asks for copy containing "Oxen of the Sun"
<i>La Vie des Peuples</i> by La Mallide		12/20/20	Letters III	To Ernest Boyd	Sends copy
The Dial 75		02/04/21	Letters I	To Harriet Shaw Weaver	Mentions meeting with T.S. Eliot and "Ulysses, Order and Myth" that appeared in it.
<i>The Divine Mystery</i> (1913) by Allen Upward		02/04/21	Letters I	To Harriet Shaw Weaver	Acknowledges receipt and thanks; Upward was Egoist contributor.
<i>New York Herald</i>		02/04/21	Letters I	To Harriet Shaw Weaver	Learns Pound has left England for good and will settle in Paris.
<i>The Little Review</i>	Nos. containing "Oxen"	02/23/21	Letters III	To Valery Larbaud	Sends copies containing "Oxen" + TS for unpublished part

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<i>The English Review</i>	April 1921		JJ / Sylvia Beach		Richard Aldington on Joyce, "The Influence of Mr. James Joyce" - charge that Ulysses "represents chaos chaotically"; JJ wanted TSE to counter and result was "Ulysses, Order, Myth" in The Dial 1923.
<i>London Times</i>		04/13/21	JJ / Sylvia Beach	To Sylvia Beach	Asks to put excerpts from Pound's <i>Instigations</i> and <i>London Times</i> ("...of the utmost sincerity,... complete coverage") into marketing prospectus of <i>Ulysses</i>
<i>The Sunday Times</i> (London)		Spring-Summer 1921	JJ / Sylvia Beach	To Sylvia Beach	Says no articles in <i>Sunday Times</i> ; had to read it to know that.
<i>Era Nuova</i>		06/07/21	Letters III	To Alessandro Francini Bruni	Assumes article his and thanks; Triestine daily newspaper 1919-23
<i>To-Day</i> (London)	June 1921 8.46	Late June 1921	Letters III	To Frank Budgen	Refs article about JJ, possibly by Holbrook Jackson

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<i>The New Republic</i>		11/06/21	Letters I	To Harriet Shaw Weaver	An article by Clive Bell was shown to him that dismisses his talents as so mediocre as not to warrant detailed treatment.
<i>Nouvelle Revue Française</i>	11/01/1921 17.98	11/06/21	Letters III	To Valery Larbaud	Thanks for dedication in his nouvelle "Amantes, heureux amantes": 522-56.
<i>My Three Husbands</i> by anonymous woman author	May 1921	11/23/21	Letters III	To Frank Budgen	Asks to find price
<i>My Three Husbands</i> by anonymous woman author	May 1921	01/31/22	Letters III	To Frank Budgen	Asks if it was he who sent and what is owed.
<i>The Little Review</i>	Autumn 1921		Pound / Joyce		See Pound's essay "Historical Survey" -- updated "Meditatio" w/ JJ in mind
<i>The Dial</i>	no.?	02/11/22	Letters I	To Robert McAlmon	refs notice of his stories by Pound -- no. with TSE's article on <i>Ulysses</i> ?

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<i>The Outlook</i>	February 1922		JJ / Sylvia Beach		Arnold Bennett's review of Ulysses, advertised in Shakespeare & Co. poster along with Sporting Times article of February 1922. Were bookshop patrons equally interested in criticism? Audience reading discourse on modernity + relativity.
<i>The Observer</i>	03/05/22	1939	Gorman (292)		Sisley Huddleston's appreciative review of Ulysses
<i>The Nation</i>	March or April '22?	1939	Gorman (292-3)		J. Middleton Murry's review of Ulysses (in Nation and Athenaeum ???)
<i>The Athenaeum</i>	March or April '22?	1939	Gorman (292-3)		J. Middleton Murry's review of Ulysses (in Nation and Athenaeum ???)
<i>The New Age</i>	March 1922		Pound / Joyce		Pound reviews Louis Berman's Glands Regularity – science / lit / popularization

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<i>The Daily Herald</i>	Look up number	03/11/22	Letters I	To Harriet Shaw Weaver	Heard of sketch about him in Daily Herald; asks to send copies of Huddleston's Observer piece (3/5/22) to Quinn, Linati, and Benco
<i>The Tyro</i>		03/17/22	Letters III	To Robert McAlmon	Refs new number, ed. by Wyndham Lewis
<i>The Daily Herald</i>	03/17/22	03/20/22	Letters III	To Harriet Shaw Weaver	Refs "The Week in Paris" by George Slocombe
<i>The Daily Express</i> (London)	03/25/22	03/20/22	Letters III	To Harriet Shaw Weaver	Refs "An Irish Rebel: and Some Flappers" by S.P.B. Mais
<i>Nouvelle Revue Française</i>	April 1922	1990	JJ / Sylvia Beach		Valery Larbaud's article on JJ
<i>Vanity Fair</i>	April 1922		Pound / Joyce		JJ interviewed by Djuna Barnes, p. 65
<i>The Dial</i>	Look up number	04/10/22	Letters I	To Harriet Shaw Weaver	Wants T.S. Eliot's article on Ulysses.
<i>The Sporting Times</i>	February 1922	04/10/22	Letters I	To Harriet Shaw Weaver	Considers Sporting Times article more trite than the Observer piece and has an even worse reputation.
Title?		04/10/22	Letters I	To Harriet Shaw Weaver	Says Valery Larbaud's article caused quite a stir.

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<i>Mercure de France</i>	04/15/22	04/10/22	Letters I	To Harriet Shaw Weaver	Mentions article by Pound to come out in the <i>Mercure</i> on the 15th.
<i>The Nation and Athenaeum</i>	04/22/1922 31.4 124-5	04/30/22	Letters III	To Harriet Shaw Weaver	Thanks for copies; contain J. Middleton Murry's review of <i>Ulysses</i>
<i>The New York Herald</i>		04/30/22	Letters III	To Harriet Shaw Weaver	Sends copy with review of <i>Ulysses</i>
<i>The Outlook</i>	04/29/22	1939	Gorman (293)		Arnold Bennett's review of <i>Ulysses</i>
<i>The Dial</i>	May 1922		Pound / Joyce		Pound's Canto VIII – lament for passing of Homeric epic of adventurous deeds
Title?		05/16/22	Letters I	To Harriet Shaw Weaver	Received Bennett's article, refs Murry's
<i>New York Tribune</i>	05/28/22	10/30/22	JJ / Sylvia Beach	To Sylvia Beach	Refs Ernest Boyd's "The Expressionism of James Joyce"
<i>The Dial</i> 6	June 1922	1990	JJ / Sylvia Beach		Ezra Pound's "Paris Letter" -- see Pound / Joyce
<i>Mercure de France</i>	June 1922	1990	JJ / Sylvia Beach		Ezra Pound's "James Joyce et Pécuchet" -- see Pound / Joyce – continued & expanded from <i>Dial</i> article same month

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<i>Today</i>	June 1922	1939	Gorman (294)		Holbrook Jackson's review of <i>Ulysses</i> - 'biggest event in history of the novel since <i>Jude the Obscure</i> '
<i>The Freeman</i>	07/19/22	1939	Gorman (299)		Mary Colum's review of <i>Ulysses</i> comparing science and literature.
<i>The New Republic</i>	07/05/22	1939	Gorman (299)		Edmund Wilson's review of <i>Ulysses</i> – status of novel as genre. In Letters I July 1922 thanks Wilson for article, and also one in <i>Evening Sun</i> .
<i>The Evening Sun</i>	?	July 1922	Letters I	To Edmund Wilson	Thanks for articles in <i>New Republic</i> 5 July 1922 and <i>Evening Sun</i> .
<i>The Evening Standard</i>	?	10/22/22	Letters I	To Harriet Shaw Weaver	
<i>The Quarterly Review</i> (London)	October 1922: 219-34	10/22/22	Letters I	To Harriet Shaw Weaver	Refs. Shane Leslie's article
<i>The English Review</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	
<i>Revue de Paris</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	
<i>The Dial</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	Refs. John Eglinton's article
<i>La Revue de Bourgogne</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	Wants used in marketing leaflet

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<i>La Semaine Littéraire</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	Wants used in marketing leaflet
<i>The Manchester Guardian</i>	Look up number	10/22/22	Letters I	To Harriet Shaw Weaver	Wants another copy and also the July number with an article on Proust.
<i>The Sunday Times</i> (London)		10/24/22	JJ / Sylvia Beach	To Sylvia Beach	Refs <i>Sunday Times</i>
<i>The Dublin Review</i>	CLXXI 1922: 112-19	10/24/22	JJ / Sylvia Beach	To Sylvia Beach	Refs "Ulysses" by Domini Canis
<i>Revue de Paris</i>	04/01/23	10/24/22	JJ / Sylvia Beach	To Sylvia Beach	Refs review by Edmond Jaloux (upcoming?)
<i>The Sunday Chronicle</i>	Look up number	11/08/22	Letters I	To Harriet Shaw Weaver	Wants extracts of Noyes' article in press leaflet + copies of it sent to Larbaud, Jaloux, Pound (along with <i>Evening Standard</i> [see Letters I 10/22/22]).
<i>The Observer</i>	03/05/22	11/25/22	Letters III	To Harriet Shaw Weaver	Suggests blurb from Sisley Huddleston be placed before that of the <i>Quarterly</i> one in the marketing leaflet. See also Gorman above.

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<i>The Dial</i>	November 1922		Pound / Joyce		See "Paris Letter" - on Italy, vigor, phallic, "courage and beauty into an unconquered consciousness" - Hemingway, etc.
<i>The English Review</i>	December 1922 (35)	11/25/22	Letters III	To Harriet Shaw Weaver	Refs Ford Madox Hueffer "'Ulysses' and the Handling of Indecencies"
<i>The English Review</i>	January 1923 (36) ??	11/25/22	Letters III	To Harriet Shaw Weaver	Asks for copies of the next number (i.e. after December 1922 no.).
<i>The Criterion</i>	January 1923		Pound / Joyce		Contains Ezra Pound's essay "On Criticism in General"; also "De Vulgari Eloquentia"
<i>Enchantillons</i>		02/05/23	Letters III	To Valery Larbaud	Thanks for sending and for dedication.
<i>The Sporting Times</i>	04/01/22	03/28/23	Letters III	To Harriet Shaw Weaver	Asks if received copy; contains negative review of <i>Ulysses</i> by "Aramis"; <i>Sporting Times</i> associated with <i>The Pink 'Un</i> .
<i>Morgante the Lesser</i> (1890) by 'Sirius' (pseudonym of Edward Martyn)	Look up number	06/11/23	Letters I	To Harriet Shaw Weaver	Requests copy.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>English Speech and Literature</i> (1915) by E. Vizetelly	1915	07/12/23	Letters III	To Sylvia Beach	Asks to order
<i>Ireland and the Making of Britain</i> (1922) by Benedict Fitzpatrick	1922	07/12/23	Letters III	To Sylvia Beach	Asks to order
<i>The New Book of Kings</i> (1884) by John Morrison Davidson	1884	07/12/23	Letters III	To Sylvia Beach	Asks for information
<i>The Complete Peerage</i> (8 vols.) ed. Lord Howard de Walden		07/12/23	Letters III	To Sylvia Beach	Asks to order
<i>Messer Marco Polo</i> (poss.)	1921	07/20/23	JJ / Sylvia Beach	To Sylvia Beach	Inquires about books by American writer Brian Oswald Donn Byrne.
<i>The Freeman</i>		08/23/23	Letters III	To Harriet Shaw Weaver	Sent copy with review of Collins' <i>Psychological Studies of Life and Letters</i> (1923); Joyce found it pretentious
<i>Psychological Studies of Life and Letters</i> by Collins	1923	08/23/23	Letters III	To Harriet Shaw Weaver	2nd Ch. "Ireland's Latest Literary Antinomian: James Joyce"
<i>The Irish Statesman</i>	10/20/23	10/23/23	Letters I	To Harriet Shaw Weaver	Mentions piece by Gogarty

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Transatlantic Review</i> (prospectus)		11/02/23	Letters III	To Harriet Shaw Weaver	Sends prospectus of Ford Madox Hueffer's <i>Transatlantic Review</i> ; published 1st fragment of WIP in April 1924 issue.
<i>The Dial</i>	November 1923 (LXXV.5): 480-3	11/19/23	Letters III	To Harriet Shaw Weaver	Refs TSE's "Ulysses, Order, and Myth"; likes it and the phrase he used in speaking to him: 'two-plane'. Lauded continuous manipulation of parallel between contemporaneity and antiquity – had importance of a "scientific discovery"
<i>Travels in Arabia Deserta</i> by Charles Montague Doughty	1888	11/19/23	Letters III	To Harriet Shaw Weaver	Thanks for sending
<i>Der Querschnitt</i>	Fall 1923 (III.3/4): 157-9	11/19/23	Letters III	To Harriet Shaw Weaver	Thanks for sending; published some early poems from <i>Chamber Music</i>
<i>The Transatlantic Review</i>		12/13/23	Letters III	To Ford Madox Hueffer	Requests copy
<i>The Criterion</i>	October 1923	12/13/23	Letters III	To Ford Madox Hueffer	Requests copy
<i>La Coscienza di Zeno</i>	1923	01/30/24	Letters III	To Ettore Schmitz	Thanks for dedication

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Klaxon</i> (Dublin)	Winter 1923-4: 14-20	02/08/24	Letters III	To A.J. Leventhal (Lawrence Emery)	Thanks for friendly notice of <i>Ulysses</i>
<i>The New York Times Book Review</i>	03/02/1924 p.7	03/24/24	Letters III	To Valery Larbaud	Asks if got copy from Sylvia Beach, containing Ernest Boyd, "Order Established in the Literary Chaos of James Joyce, A Guide to 'Ulysses' and its Author" -- review of Herbert Gorman's James Joyce: The First Forty Years (1924)
<i>The Chicago Tribune</i>		04/06/24	Letters III	To Ford Madox Hueffer	Thanks for kind review in Sunday's issue
<i>This Quarter</i> 1.4	04/01/24		Gheerbrandt 313		Contains WIP 2.4
<i>The Transatlantic Review</i>	April 1924	04/06/24	Letters III	To Ford Madox Hueffer	Published 1st fragment of WIP; can probably assume received a copy of the issue.
<i>Nouvelles Littéraires</i>	05/31/1924 3.85	06/02/24	Letters III	To Harriet Shaw Weaver	Refs number containing Frédéric Lefèvre's "Une Heur Avec M. Valery Larbaud" + notice of the <i>Commerce</i> no. (1 Summer 1924) in which some of his translation of <i>Ulysses</i> appears.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Commerce</i>	July 1924	07/11/24	Letters III	To Harriet Shaw Weaver	Fragments of <i>Ulysses</i> translation are to appear in <i>Commerce</i> and <i>Revue de Luxe</i> this month.
<i>Revue de Luxe</i>	July 1924	07/11/24	Letters III	To Harriet Shaw Weaver	Fragments of <i>Ulysses</i> translation are to appear in <i>Commerce</i> and <i>Revue de Luxe</i> this month.
<i>The Chicago Tribune</i>		07/17/24	JJ / Sylvia Beach	To Sylvia Beach	Refs Margaret Anderson's letter in Sunday <i>Chicago Tribune</i> , asks why she's not listed as publisher of <i>Commerce</i>
<i>Commerce</i>		07/23/24	JJ / Sylvia Beach	To Sylvia Beach	Asks again when it will be out
<i>S. Patrick, His Life, His Heroic Virtues</i> , by Thomas H. Kinane, R.C. Dean of Cashel	1889	07/25/24	JJ / Sylvia Beach	To Sylvia Beach	Requests from Burnes Oates and Washbourne (London)
<i>The Life of St. Patrick</i> , by William Canon Flemming	1905	07/25/24	JJ / Sylvia Beach	To Sylvia Beach	Requests from Burnes Oates and Washbourne (London)
<i>Boulogne-sur-mer: St. Patrick's Native Tower</i> , by William Canon Flemming	1907	07/25/24	JJ / Sylvia Beach	To Sylvia Beach	Requests from Burnes Oates and Washbourne (London)

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Life and Times of Daniel O'Connell</i> , by Thomas Luby	187[?]	07/25/24	JJ / Sylvia Beach	To Sylvia Beach	Requests from Burnes Oates and Washbourne (London)
<i>Life of Theobald Wolfe Tone</i> , by Theobald Wolfe Tone	1826	07/25/24	JJ / Sylvia Beach	To Sylvia Beach	Requests from Burnes Oates and Washbourne (London)
<i>Feuilles Libres</i>		08/05/24	JJ / Sylvia Beach	To Sylvia Beach	Wants preceding issue; currently reading Fargue's dedication (see Ellmann)
<i>The Daily Mail</i>		08/07/24	Letters III	Stanislaus Joyce to James Joyce	Wyndham Lewis imitates <i>Work in Progress</i> in his columns.
<i>The Irish Statesman</i>	Look up number	08/16/24	Letters I	To Harriet Shaw Weaver	Saw paragraph on Quinn's death, as well as notices in Paris papers.
<i>The Freeman's Journal</i>	08/11/23	08/16/24	Letters I	To Harriet Shaw Weaver	Requests copy
<i>The Irish Times</i>	08/11/23	08/16/24	Letters I	To Harriet Shaw Weaver	Requests copy
<i>The Irish Times Commerce</i>	Summer 1924	08/17/24	Letters III	To Sylvia Beach	Asks if received copy
			Ellmann (562)		1st French fragments of <i>Ulysses</i> published just ahead of book
<i>Commerce</i>		08/17/24	Letters III	To Sylvia Beach	Asks what is wrong with it
<i>The Voyage</i> by John Middleton Murry	1924	08/17/24	Letters III	To Sylvia Beach	Asks if has read, reviewed in <i>Criterion</i> II April 1924

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Criterion</i>	April 1924 II: 483-6	08/17/24	Letters III	To Sylvia Beach	Asks if read Murry's <i>The Voyage</i> (1924), reviewed in this no.
<i>Flandre Liberale</i>	06/29/24	07/04/24	JJ / Sylvia Beach	To Sylvia Beach	Refs Pierre Messiaen's "Dedalus"
<i>De la Gaule à la France; Nos origines historiques,</i> Camille Jullian	1922	08/17/24	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>The Irish Times</i>	08/15/24	08/17/24	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Shakespeare and Company</i>		08/17/24	Letters III	To Sylvia Beach	Says he read
<i>The Chicago Tribune</i>	08/17/24	08/25/24	JJ / Sylvia Beach	To Sylvia Beach	Asks to send supplement to Stanislaus and HSW
<i>The Chicago Tribune</i>	08/24/24	08/25/24	JJ / Sylvia Beach	To Sylvia Beach	Asks to send supplement to Stanislaus and HSW
<i>Commerce</i>		09/24/24	JJ / Sylvia Beach	To Sylvia Beach	Asks to send copy to Jonathan Cape
<i>The Fortnightly Review</i>	Look up number	09/30/24	Letters I	To Harriet Shaw Weaver	Sends copy of number containing negative review by George Bernard Shaw
<i>Transatlantic Review</i>		10/01/24	JJ / Sylvia Beach	To Sylvia Beach	Asks to send copy to TS Eliot
<i>Medieval People,</i> by Eileen Power	1924	10/06/24	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Commerce</i>		10/07/24	Letters III	To Harriet Shaw Weaver	Asks if received copy
<i>César Franck,</i> by Vincent d'Indy	1910	10/16/24	JJ / Sylvia Beach	To Sylvia Beach	Requests copy

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Now and Then</i>		11/07/24	JJ / Sylvia Beach	To Sylvia Beach	Says borrowing; lit periodical that began in 1921
<i>Penguin Island</i> by Anatole France	1908	11/09/24	Letters III	To Harriet Shaw Weaver	Asks for copy
<i>Penguin Island</i> by Anatole France	1908	11/16/24	Letters I	To Harriet Shaw Weaver	Thanks for sending.
<i>Richard Feverel</i> , by George Meredith		12/20/24	JJ / Sylvia Beach	To Sylvia Beach	Requests copy
<i>Commerce</i>		12/30/24	Letters III	To Harriet Shaw Weaver	Says in clinic for release of <i>Commerce</i>
<i>Contact Collection of Contemporary Writers</i>	1925	1990	JJ / Sylvia Beach		Published intro to HCE in., ed. William Bird
<i>Nouvelle Revue Française</i>	March 1925 14.3: 309-13	02/02/25	Letters III	To Valery Larbaud	Thanks for copy; contains Ernest Boyd, "A Propos de James Joyce et de 'Ulysses'", Réponse a l'Article de M. Valery Larbaud"; apparently a response to what Larbaud sent Joyce on 2 February (see 7 March 1925 to Harriet Shaw Weaver)

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>This Quarter</i>	Autumn- Winter 1925-6 1.2 108-23	03/13/25	Letters III	To Ernest Walsh	Promises fragment for <i>This Quarter</i> ; ended up contributing the Shem section of WIP to I.2 (Autumn- Winter 1925-6): 108-23.
<i>This Quarter</i>	Spring 1925 1.1	03/13/25	Letters III	To Ernest Walsh	Praises for dedicating to Ezra Pound
<i>Calendar of Modern Letters</i>	April 1925 1.2: 139-46	05/01/25	Letters III	To Harriet Shaw Weaver	Points to new London review containing Bertram Higgins, "The Natural Pander: Leopold Bloom and Others" - see other issues for JJ reviews
<i>The Lunatic at Large</i> , by Joseph Storer Clouston	1899	Spring 1925	JJ / Sylvia Beach	To Sylvia Beach	Asks if she has
<i>Musical America</i>		Spring 1925	JJ / Sylvia Beach	To Sylvia Beach	Requests no. of
<i>The Calendar of Modern Letters</i>	July 1925 I.5: 347-55	Spring 1925	JJ / Sylvia Beach	To Sylvia Beach	Asks for May number but Edwin Muir's article appears in this one, "James Joyce: The Meaning of <i>Ulysses</i> "
<i>The Evolution of the Dragon</i> , by Sir Grafton Eliot Smith	1919	Spring 1925	JJ / Sylvia Beach	To Sylvia Beach	Requests
<i>Ancient Art and Ritual</i> , by Jane Ellen Harrison	1913	Spring 1925	JJ / Sylvia Beach	To Sylvia Beach	Requests

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<i>Navire d'Argent</i>	October 1925 1.5: 59-74	07/08/25	Letters III	To Harriet Shaw Weaver	Wants to leave fragment of WIP for Sylvia Beach for September issue of the <i>Calendar</i> . He ended up withdrawing it in September 1925 and published instead in the <i>Navire d'Argent</i> .
<i>The Criterion</i>		07/21/25	Letters III	To Harriet Shaw Weaver	Says new no. out
<i>The Criterion</i>	July 1925 3.12	07/31/25	Letters III	To Harriet Shaw Weaver	Asks if sent to Pound, containing fragment of WIP 498-510
<i>Corriere della Sera</i>		Aug 1925	JJ / Sylvia Beach	To Sylvia Beach	Asks to send to HSW
<i>Irish Statesman</i>		Aug 1925	JJ / Sylvia Beach	To Sylvia Beach	Asks to send to HSW
<i>This Quarter</i>		09/27/25	Letters I	To Harriet Shaw Weaver	Cannot make head or tail of Mr. Walsh's review
<i>Navire d'Argent</i>		10/10/25	Letters I	To Harriet Shaw Weaver	Sends copy
<i>Calendar</i>		10/10/25	Letters I	To Harriet Shaw Weaver	Sends copy
<i>Vient de Paraître</i>		10/10/25	Letters I	To Harriet Shaw Weaver	Sends copy
<i>Chicago Tribune</i>		10/10/25	Letters I	To Harriet Shaw Weaver	Sends copy
<i>Revue Nouvelle</i>		10/22/25	Letters I	To Harriet Shaw Weaver	Asks if she got copy with French translation of "Hades" by Morel.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Navire d'Argent</i>		11/05/25	Letters III	To Herbert Gorman	Corrects facts for biography and encloses copies of <i>Navire d'Argent</i> and This Quarter.
<i>This Quarter</i>		11/05/25	Letters III	To Herbert Gorman	Corrects facts for biography and encloses copies of <i>Navire d'Argent</i> and This Quarter.
<i>This Quarter</i>	No. 2	11/11/25	Letters I	To Harriet Shaw Weaver	Mr. Anthell received printed musical supplement
<i>Two Worlds</i>	09/15/1925 no.1	Nov.? 1925	Letters I	To Eric Pinker	Mentions full-page ads in <i>Nation</i> (NY & London eds.) and <i>New Republic</i>
<i>The Nation</i> (NY)		Nov.? 1925	Letters I	To Eric Pinker	Mentions full-page ad for <i>Two Worlds</i>
<i>The Nation</i> (London)		Nov.? 1925	Letters I	To Eric Pinker	Mentions full-page ad for <i>Two Worlds</i>
<i>Vient de Paraître</i>	11/23/25	11/23/25	Letters III	To Harriet Shaw Weaver	Encloses René Lalou's review WIP as published in <i>Navire d'Argent</i> ; in the "Ce Qu'on Lit" section of <i>Vient...</i>
<i>The New Republic</i>	11/14/1925 44:297-80	11/23/25	Letters III	To Harriet Shaw Weaver	Encloses Edmund Wilson's "James Joyce as a Poet"
<i>Sims Reeves</i>	1924	03/05/26	Letters III	To Harriet Shaw Weaver	Says he read

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Juno and the Paycock</i>	1924	03/05/26	Letters III	To Harriet Shaw Weaver	Says he read
<i>Paintings of William Blake</i>	1925	03/05/26	Letters III	To Harriet Shaw Weaver	Says he read
<i>Le Culte des héros et ses conditions sociales: St. Patrick, héro nationale d'Irlande</i> by C. Czarnowskie	1919	04/17/26	Letters III	To Harriet Shaw Weaver	Asks if read
Title?		1982	Ellmann (560-1)		Eugenio Montale's favorable review of Italo Svevo
<i>Navire d'Argent</i>	February 1926	1982	Ellmann (560-1)		Adrienne Monnier dedicates number to Italo Svevo (Ettore Schmitz)
<i>Commerce</i>	February 1926	1982	Ellmann (560-1)		Valery Larbaud publishes article on Italo Svevo (Ettore Schmitz)
<i>La Revue Nouvelle</i>	02/15/26	08/24/26	JJ / Sylvia Beach	To Sylvia Beach	Refs, which published French translation of "Clay" ("Cendres")
<i>The Tyrocritic</i>	Spring & Fall 1926	1990	JJ / Sylvia Beach		JJ submitted piece at Lewis' request, probably Geometry Lesson, but it was rejected.

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<i>The Art of Being Ruled</i> , Wyndham Lewis	1926		Ellmann (595)		Attacked Joyce and Stein for "silliness," marking the beginning of hostilities toward Joyce
<i>Les Nouvelles Littéraires</i>		08/24/24	JJ / Sylvia Beach	To Sylvia Beach	Sent to Adrienne Monnier
<i>Story of the Alphabet</i> , by Edward Clodd	1900	09/02/26	JJ / Sylvia Beach	To Sylvia Beach	Asks if arrived
<i>Swift; Les années de jeunesse et le "Conte du Tonneau"</i>	1925	09/02/26	JJ / Sylvia Beach	To Sylvia Beach	Requests; it's in his personal library (Trieste?) -- check Gillespie
<i>Fiera Letteraria</i> 2.38: 5	09/19/26	09/30/26	Letters III	From Ettore Schmitz	Refs Eugene Montale, "Cronache della Letteratura Straniere: 'Dubliners' di James Joyce
<i>Gentlemen Prefer Blondes</i>		11/08/26	Letters I	To Harriet Shaw Weaver	Read in 3 days.
<i>The Enemy</i> 1, ed. Wyndham Lewis	January 1927	09/22/26	JJ / Sylvia Beach	To Sylvia Beach	Refs "The Revolutionary Simpleton", pp. 25-192
<i>History of Rationalism</i> by William Hartpole Lecky	1865	01/08/27	Letters III	To Stanislaus Joyce	Requests copy
<i>The Day's Burden</i> by Kettle	1910	01/08/27	Letters III	To Stanislaus Joyce	Requests copy
<i>Home Rule Finance</i> by Kettle	1911	01/08/27	Letters III	To Stanislaus Joyce	Requests copy

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<i>La Trahison des Clercs</i> , by Julian Benda	1927	late January 1927	JJ / Sylvia Beach	To Sylvia Beach	Refs Benda, celebrated book published this year.
<i>This Quarter</i> 1.3	Spring 1927		JJ / Sylvia Beach		See p. 289
<i>transition</i> 1		04/05/27	JJ / Sylvia Beach	To Sylvia Beach	also 8 April 1927, says creating a lot of buzz
<i>The Humanist</i> IV.4	April 1927	04/05/27	JJ / Sylvia Beach	To Sylvia Beach	also 8 April 1927, says HSW did not get, which reprints protest against Samuel Roth; in May says he has nothing to send them, so probably read.
<i>The Outlook</i>	no. 59 (14 May 1927): 590	May 1927	JJ / Sylvia Beach	To Sylvia Beach	Gives advice on letter, response to a "defense" by Roth in "Correspondence" section.
book about the Danes (Title?)		05/15/27	JJ / Sylvia Beach	To Sylvia Beach	Refs
Lewis Carroll (not <i>Alice in Wonderland</i>)		05/31/27	Letters I	To Harriet Shaw Weaver	Read a few weeks ago.
<i>La Langue de Rabelais</i>		05/31/27	Letters I	To Harriet Shaw Weaver	Read a few chapters, though never read Rabelais himself.
<i>Studies</i>		May-June 1927	JJ / Sylvia Beach	To Sylvia Beach	Refs current no., containing another article on Guinness's brewery.
<i>Die Litterarische Welt</i>	06/17/27	06/06/27	JJ / Sylvia Beach	To Sylvia Beach	Refs Ivan Goll's "The Homer of our Time," p. 396-400

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<i>Die Weltbühne</i>	12/27/27	06/06/27	JJ / Sylvia Beach	To Sylvia Beach	Refs Ivan Goll's " <i>Ulysses: Sub Specie Aeternitatis</i> ," pp. 960-3
<i>The Life of Tim Healy</i> , by Liam O'Flaherty	1927	06/06/27	JJ / Sylvia Beach	To Sylvia Beach	Asks to reserve copy
<i>La Nouvelle Revue Francaise</i>	XV.179 (1 Aug 1928): 204-26	06/06/27	JJ / Sylvia Beach	To Sylvia Beach	Asks about, later published as
<i>transition</i> 3		06/18/27	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>The Life of Tim Healy</i> , by Liam O'Flaherty	1927	06/19/27	JJ / Sylvia Beach	To Sylvia Beach	Confirms receipt
<i>Il Convegno</i> (Milan) VII.11-12: 813-28	(Nov / Dec 1926)	06/19/27	JJ / Sylvia Beach	To Sylvia Beach	Confirms receipt, contains "Da L'Ulysses di James Joyce"
<i>The Enemy</i> 1, ed. Wyndham Lewis	Jan (Feb) 1927	Late June 1927	JJ / Sylvia Beach	To Sylvia Beach	Asks for another copy, containing WL's attack on JJ, in order to revise segment of WIP for transition 5 (Aug 1927) – evidence of working w/outside source directly in text
<i>Panorame de la littérature anglaise contemporaine</i>	1929	07/10/27	Letters III	To Harriet Shaw Weaver	Refs. positive personal remark by René Lalou, who later wrote <i>Panorame</i>
<i>The Daily Herald</i> (London)	07/14/27	07/26/27	Letters III	To Harriet Shaw Weaver	Refs George Slocombe, "On the Left Bank"

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>transition 6</i>	August 1927	08/14/27	JJ / Sylvia Beach	To Sylvia Beach	JJ admitted that in the "Mookes and Gripes" episode he allowed Shaun to speak with the voice of <i>The Enemy</i> – evidence of working w/outside source directly in text
Whitehead and Spengler		September 1927	JJ / Sylvia Beach	To Sylvia Beach	Asks who they are and what written, asks about books.
<i>The Enemy 2</i> , ed. Wyndham Lewis	September 1927	09/22/26	JJ / Sylvia Beach	To Sylvia Beach	Henry John wrote another attack on Joyce, "Towards Reintegration"
<i>OUP Book</i>		09/27/27	JJ / Sylvia Beach	To Sylvia Beach	Refs, what is it?
<i>Enclosure</i>		10/01/27	JJ / Sylvia Beach	To Sylvia Beach	Wants 30 franc copy of enclosed, but what?
<i>transition 7</i>	October 1927	October 1927	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>transition 8</i>	November 1927	November 1927	JJ / Sylvia Beach	To Sylvia Beach	Refs; contains segment first printed in <i>Navire d'Argent</i> (Oct 1925)
<i>transition 9</i>	December 1927		JJ / Sylvia Beach	To Sylvia Beach	Contains defense of JJ against attacks of WL, titled "First Aid to the Enemy"

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Chicago Tribune</i>	03/20/27	01/01/28	JJ / Sylvia Beach	To Sylvia Beach	Refs Robert Sage, ed. of <i>transition</i> but also on staff of <i>The Chicago Tribune</i> in which appeared his article about JJ & transition, "Magazines in General and One in Particular." p.5
<i>Paris</i>		01/20/28	JJ / Sylvia Beach	To Sylvia Beach	Refs, what is it?
<i>The Majestic</i>		01/20/28	JJ / Sylvia Beach	To Sylvia Beach	Refs, what is it?
<i>The Childermass</i> by Wyndham Lewis	1928	03/28/28	Letters III	To Harriet Shaw Weaver	Says Sylvia Beach advertising it and the poster says "the only book that can at all hold a card to it is ___" -- presumably <i>Ulysses</i> ?
<i>transition</i> 11	February 1928	February 1928	Ellmann (596); JJ / Sylvia Beach	To Sylvia Beach	Publication of Shaun's lecture in response to Wyndham Lewis' attacks in <i>Time and Western Man</i> , "The Muddiest Thick That Was Ever Heard Dump"; asks to be sent to Frank Budgen
<i>La Revue Européen</i> no. 1-2: 164-9	Jan / Feb 1928	03/22/28	JJ / Sylvia Beach	To Sylvia Beach	Asks to lend to Mrs. Nutting

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<i>La Gazette des Nations</i> 8	03/03/28	03/22/28	JJ / Sylvia Beach	To Sylvia Beach	Marcel Brion wrote, "Les Grandes Figures Europeens: James Joyce, Romancier."
<i>The Canterbury Tales</i>		03/22/28	JJ / Sylvia Beach	To Sylvia Beach	Requests copy
<i>transition</i> 12: 7-27	March 1928	03/25/28	JJ / Sylvia Beach	To Sylvia Beach	Thanks for this and CT (prob. <i>Canterbury Tales</i>)
<i>transition</i> 12: 7-27	March 1928	03/28/28	Letters III	To Harriet Shaw Weaver	Refs publication of Ondt & Gracehoper in; continued response to Lewis' attacks in <i>Time and Western Man</i>
<i>La Gazette des Nations</i>		03/28/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>La Revue Européen</i>		03/28/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>The Daily Mail</i>		03/28/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>The Freeman's Journal</i>	01/09/01	03/28/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>La Gazette des Nations</i>		04/01/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>La Revue Européen</i>		04/01/28	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Breaking Priscian's Head; or, English as she will be spoke and wrote</i> , by John Y.T. Greig	1928	04/28/28	JJ / Sylvia Beach	To Sylvia Beach	Requests copy
<i>The Daily Mail</i>		April / May 1928	JJ / Sylvia Beach	To Sylvia Beach	Refs

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Good Soldier</i> (1915) by Ford Madox Ford		April / May 1928	JJ / Sylvia Beach	To Sylvia Beach	Refs
Book on Provence		April / May 1928	JJ / Sylvia Beach	To Sylvia Beach	Asks for good book on in English.
<i>The Daily Mail</i>		05/22/28	Letters I	To Sylvia Beach	Refs that he read it
<i>The Good Soldier</i> (1915) by Ford Madox Ford	1915	05/22/28	Letters I	To Sylvia Beach	Requests copy
<i>The Criterion</i>	Aug or Sep 1928			Ellmann (607)	Sean O'Faolain's review of ALP greatly worried Joyce.
<i>transition</i> 13	Summer 1928	09/03/28	JJ / Sylvia Beach	To Sylvia Beach	Tells Adrienne Monnier to see, containing 2nd watch of Shaun, pp. 5-32
<i>La Seine et ses Bords</i> , by Charles Nodier	1836	09/09/28	JJ / Sylvia Beach	To Sylvia Beach	Requests; also various business re: <i>transition</i> 5, 6, 13.
<i>The Strange Necessity</i> by Rebecca West		09/20/28	Letters I	To Harriet Shaw Weaver	Says he read 50 pp. of
<i>Time and Western Man</i>	1927	09/20/28	Letters I	To Harriet Shaw Weaver	Refs, and asks if Lewis has published anything else in recent months; Ch. 16 specifically an attack on Joyce, "An Analysis of the Mind of James Joyce" pp. 91-130
<i>The New Statesman</i>		09/20/28	Letters I	To Harriet Shaw Weaver	Says a review of him in every week

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Irish Statesman</i>		09/20/28	Letters I	To Harriet Shaw Weaver	Says a review of him in every week
<i>Cantos</i> (by Ezra Pound)		09/20/28	Letters I	To Harriet Shaw Weaver	Mentions that they're out
<i>transition</i> 14	Fall 1928	01/01/28	JJ / Sylvia Beach	To Sylvia Beach	Contains Robert Sage's critical study of ALP, "ETC," pp. 171-8.
<i>Tidbits</i>		10/07/28	Letters III	To Valery Larbaud	Sends copy w/ Miss or Mrs. Ursula Bloom's advice on when to say yes.
<i>The Definition of the Godhead</i> (December 1928) by Dora Marsden		December 1928	Letters I	To Harriet Shaw Weaver	Says looks forward to reading.
<i>Blast</i> 2, ed. Wyndham Lewis	1914?	04/18/29	Letters III	To Harriet Shaw Weaver	Thanks for sending

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<i>The Enemy</i> 3, ed. Wyndham Lewis	January 1929	04/18/29	Letters III	To Harriet Shaw Weaver	Asks if read; contains long article by Lewis on JJ - "polygluttonous volume (always 'in progress'-- Continuous Present." Also attacked Eugene Jolas, Elliott Paul, Robert Sage, and <i>transition</i> itself, as well as JJ, in "The Diabolical Principle". A response to <i>transition</i> 9 (Dec 1927), which had a defense of JJ titled "First Aid to the Enemy"
<i>The Fortnightly Review</i>		04/26/29	Letters III	To Harriet Shaw Weaver	Refs Gilbert's essay on <i>Ulysses</i>
<i>transition</i> , pp. 184-9	???		JJ / Sylvia Beach		Dougald McMillan's critical study of <i>Our Exag</i> ; critical response integral to discursive dvpt of WIP / FW; see n. 2 p. 215 in JJ / Sylvia Beach
<i>The Times Literary Supplement</i>		07/16/29	Letters I	To Harriet Shaw Weaver	Asks to watch
<i>The Spectator</i>		07/16/29	Letters I	To Harriet Shaw Weaver	Asks to watch
<i>The New Statesman</i>		07/16/29	Letters I	To Harriet Shaw Weaver	Asks to watch

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<i>The Catholic News</i>		07/16/29	Letters I	To Harriet Shaw Weaver	Asks to watch
<i>transition</i> 21: 259-62	1932	07/16/29	JJ / Sylvia Beach	To Sylvia Beach	Refs recording of last pp. of ALP with C.K. Ogden, who later translated into Basic English
<i>Psyche</i> 46: 92-5	Oct 1931	07/16/29	JJ / Sylvia Beach	To Sylvia Beach	Refs recording of last pp. of ALP with C.K. Ogden, who later translated into Basic English
<i>The Fortnightly Review</i>		July 1929	Letters I	To Valery Larbaud	Says Stuart Gilbert has an article in current number
<i>Revue de Paris</i>		July 1929	Letters I	To Valery Larbaud	Stuart Gilbert's chapter on "Hades" and a French one on "Wandering Rocks" coming out in next number.
<i>Criterion Miscellany</i>		07/22/29	JJ / Sylvia Beach	To Sylvia Beach	Asks to sent to Les Deserts (??)
<i>London River</i> by H.M. Tomlinson		August 1929	Letters III	To Frank Budgen	Suggests he read
<i>Vanity Fair</i>		08/12/29	Letters III	Frank Crowninshield to Caresse Crosby	Series of questions for JJ in <i>Vanity Fair</i> (1914-35)

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<i>The Evening Standard</i>	09/19/29	September 1929	Letters III	To Valery Larbaud	Cannot make out Arnold Bennett's attitude toward WIP because he attacked language but keeps returning to it - "Books and Persons" section
<i>The Fortnightly Review</i>		09/20/29	Letters III	To Valery Larbaud	Refs Gilbert's article on <i>Ulysses</i> , "An Irish Ulysses: The Hades Episode"
<i>Neue Zürcher Zeitung</i>	Feb 1928			Ellmann (622)	Article on Joyce
<i>Echanges</i>		03/18/30	Letters I	To Harriet Shaw Weaver	One (two?) of Stuart Gilbert's chapters appears in.
<i>Revue de Genève</i>		03/18/30	Letters I	To Harriet Shaw Weaver	One (two?) of Stuart Gilbert's chapters appears in.
<i>The Morning Post</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Daily Telegraph</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Daily News</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Manchester Guardian</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Irish Independent</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Irish Statesman</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in

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<i>The Chicago Daily Tribune</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The New York World</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The New York Sun</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Daily Mail</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The New York Times</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>l'Intransigeant</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>La Rampe</i>		03/18/30	Letters I	To Harriet Shaw Weaver	Asks to get notice of Sullivan in
<i>The Daily Telegraph</i>		09/06/30	Letters III	To Harriet Shaw Weaver	Refs Herbert Hughes' note on The Joyce Book
<i>The Apes of God</i> by Wyndham Lewis	1930	10/22/30	Letters III	To Harriet Shaw Weaver	Enquires only about availability and price
<i>Nouvelle Revue Française</i> 19.212: 633-46	05/01/31	12/22/30	Letters III	To Harriet Shaw Weaver	WIP fragment published; says assisting Fr. trans. of ALP
<i>Revue des Deux Mondes</i> (Paris) 7th period, 45th year, no. 28: 686-97	08/01/25	01/07/31	Letters III	Louis Gillet to James Joyce	Apologizes for negative review - "Littératures Étrangères." Du Cot and expresses admiration of WIP.

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The New Review</i> I.1	Jan-Feb 1931		Pound / Joyce		In "After Election" pp. 53-4, Pound attacked JJ and his friends; beg. of public support for Italian fascism
Book on Lewis Carroll		04/25/31	JJ / Sylvia Beach	To Sylvia Beach	Returns
<i>Criterion Miscellany</i> 26	05/08/31	04/25/31	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>La Nouvelle Revue Francaise</i>		05/05/31	JJ / Sylvia Beach	To Sylvia Beach	Refs + attack on Ezra Pound
<i>La Nouvelle Revue Francaise</i> XIX.2/2: 633-46	05/01/31	05/10/31	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Bifur</i> 3: 27-32 (Paris)	September 1929	05/18/31	JJ / Sylvia Beach	To Sylvia Beach	refs fr. trans. <i>Pomes Pennyeach</i> by August Morel: "Poèmes d'Api"
<i>La Nouvelle Revue Francaise</i>		06/08/31	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Frankfurter Zeitung</i>	07/19/31				"Vielleicht ein Traum" - story wrongly attributed to Joyce (was by Michael Joyce) – beginning of controversey
<i>Les Nouvelles Littéraires</i>		08/07/31	JJ / Sylvia Beach	To Sylvia Beach	Asks to have Adrienne Monnier look up Kafka / Michael Joyce affair

Item	Item Date	Doc Date	Document	Correspondent	Notes
"Evening Standard" (BBC Radio Programme, with Harold Nicolson on JJ)	12/06/31	08/13/31	JJ / Sylvia Beach	To Sylvia Beach	Refs Harold Nicolson; his talk originally to air in November 1924 (accurate?); he wrote twice to Sylvia Beach about the attempted censorship of his talk; his long letter of 2 December is at Buffalo.
<i>La Revue des Deux Mondes</i>		08/16/31	JJ / Sylvia Beach	To Sylvia Beach	Published Louis Gillet's article; asks sent to George Moore and himself; also says nothing in Sunday Papers re: Irene Kafka / Michael Joyce affair
THE PRESS		August 1931	JJ / Sylvia Beach	To Sylvia Beach	Refs drivell.
<i>The Chicago Tribune</i>		Mid September 1931	JJ / Sylvia Beach	To Sylvia Beach	Requests 3 copied
<i>l'Intransigeant</i>		Mid September 1931	JJ / Sylvia Beach	To Sylvia Beach	Requests 3 copies
<i>The Fortnightly Review</i> XXVI 751: 46-58	07/01/29	Mid September 1931	JJ / Sylvia Beach	To Sylvia Beach	Refs Stuart Gilbert, "An Irish Ulysses: The Hades Episode"
<i>Der Querschnitt</i> X	1931	09/20/31	JJ / Sylvia Beach	To Sylvia Beach	Returns
<i>The New Statesman</i>	02/27/31	12/07/31	Letters I	To Harriet Shaw Weaver	Mentions forthcoming article re: John Sullivan
<i>l'Afrique vous parle</i> (film)		12/07/31	Letters I	To Harriet Shaw Weaver	Mentions that he saw

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<i>The London Times</i>	Find Date	12/18/31	Letters III	To Harriet Shaw Weaver	Crisis in the BBC precipitated by Nicholson. Alfred Noyes has started a polemic vs. JJ in the Times (London?).
<i>Living Authors</i>		12/19/31	JJ / Sylvia Beach	To Sylvia Beach	Refs, in which Harold Nicolson says related to Irish leader Richard Rowan
<i>La Revue Francaise</i>		12/19/31	JJ / Sylvia Beach	To Sylvia Beach	Is keeping articles, which he likes very much
<i>Catholic World</i> 22: 641-52	March 1931	01/14/32	Letters III	To Herbert Gorman	Requests copies, for Michael J. Lennon's "James Joyce"
<i>The Fortnightly Review</i>		02/13/32	Letters I	To T.S. Eliot	Mentions they've had Gilbert's article on W.I.P. for nearly two years.
<i>Key to Ulysses</i> by Paul Jordan Smith		03/01/32	Letters I	To Frank Budgen	Tells to see
<i>James Joyce and the Plain Reader</i> , by Charles Duff	1932	03/13/32	JJ / Sylvia Beach	To Sylvia Beach	Refs
<i>Contempo</i> III.13	02/15/34	03/28/32	JJ / Sylvia Beach	To Sylvia Beach	Contains fragment of FW 7-10, Bennet Cerf's "Publishing <i>Ulysses</i> ," "A Footnote to 'Work In Progress'"
<i>l'Âme du vin</i>		03/28/32	JJ / Sylvia Beach	To Sylvia Beach	Refs p.2

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<i>Die Weltbühne</i>	1932	07/22/32	Letters III	To Harriet Shaw Weaver	Refs
<i>Dublin Magazine</i> 7.2: 40-8	April - June 1932	07/22/32	Letters III	To Harriet Shaw Weaver	Refs
<i>The Enemy</i>		07/22/32	Letters III	To Harriet Shaw Weaver	Refs
<i>Time and Western Man</i>		07/22/32	Letters III	To Harriet Shaw Weaver	Refs
<i>Europäische Review</i> 8.9: 547-68	September 1932	August 1932	Letters III	From Carl Jung	Remarks later published in
<i>Wirklichkeit der Seile</i>	1933	August 1932	Letters III	From Carl Jung	Remarks later published in
<i>transition</i> 22	February 1933	09/26/32	JJ / Sylvia Beach	To Sylvia Beach	Says working for (pp. 49-76)
BOOKS RECEIVED		10/09/32	JJ / Sylvia Beach	To Sylvia Beach	Says received, but no titles given
<i>The New Republic</i> (New York) LXXIII.939: 70	11/30/32	10/01/32	Letters III	To Alfred Bergen	Says "Ecce Puer" to be published in, offers to have copy sent.
IRISH NEWSPAPERS		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to send Thursday issues of all
<i>The Daily Telegraph</i>		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to check for notice that JJ sent condolences to George Moore's funeral
<i>The Daily Mail</i>		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to check for notice that JJ sent condolences to George Moore's funeral
<i>The Daily Herald</i>		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to check for notice that JJ sent condolences to George Moore's funeral

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<i>The Daily News</i>		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to check for notice that JJ sent condolences to George Moore's funeral
<i>The Express</i>		01/29/33	Letters I	To Harriet Shaw Weaver	Asks to check for notice that JJ sent condolences to George Moore's funeral
<i>The Morning Post</i>		02/06/33	Letters I	To W.K. Magee	Asks to read for George Moore's funeral announcement
<i>The Criterion</i>	December 1932	02/06/33	Letters I	To W.K. Magee	Poem appeared in.
<i>Life and Letters</i>		03/21/33	Letters I	To W.K. Magee	Says read his article in.
<i>La Semaine à Paris</i>	17-24 May 1929	03/21/33	Letters III	Paul Léon to Harriet Shaw Weaver	Asks for ref. of number referring to one of Lucia's dance competitions
<i>The New Statesman</i>		03/21/33	Letters III	Paul Léon to Harriet Shaw Weaver	Thanks for sending
<i>The Sunday Times</i>		03/23/33	Letters III	Paul Léon to Harriet Shaw Weaver	Wrong reference, perhaps was in <i>Observer</i>
<i>Nineteenth Century</i> 13.674: 491-7	April 1933	05/07/33	Letters III	Paul Léon to Frank Budgen	Suggests he read Louis Golding "A Sidelight on James Joyce"
<i>James Joyce</i>	1933	05/07/33	Letters III	Paul Léon to Frank Budgen	Louis Golding also published a study titled...

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<i>Time and Tide</i> by Wyndham Lewis	1931	07/23/34	Letters III	To Harriet Shaw Weaver	Refers to newsboys shouting about "l'Autriche" and Pound & Lewis' sympathies for Hitler and Mussolini. MIGHT HAVE READ?
<i>Hitler</i> by Wyndham Lewis	1931	07/23/34	Letters III	To Harriet Shaw Weaver	MIGHT HAVE READ
<i>The Jews, Are They Human?</i>	1939	07/23/34	Letters III	To Harriet Shaw Weaver	MIGHT HAVE READ
<i>The Hitler Cult</i>	1939	07/23/34	Letters III	To Harriet Shaw Weaver	MIGHT HAVE READ
<i>The Irish Times</i>	07/21/34	07/31/34	Letters III	To Stanislaus Joyce	Refs Oliver Gogarty's poem and picture of prize pigs in
<i>The Irish Times</i>	10/27/34		Ellmann (678)		Long, not unfriendly article on WIP
<i>Vanity Fair</i>		11/21/34	Letters III	To George Joyce	Cannot find in Zurich. Staying in Carlton Elite Hotel
<i>The New Yorker</i>	01/21/25		Ellmann (678)		Published interview with George Joyce, mostly asking about father
<i>La Semaine à Paris</i>		July 1935	Letters I	To George and Helen Joyce	Sends copy
<i>The Irish Free Press</i>		July 1935	Letters I	To George and Helen Joyce	Sends copy
<i>La Revue Universelle</i>		July 1935	Letters I	To George and Helen Joyce	Sends copy
<i>transition</i>		July 1935	Letters I	To George and Helen Joyce	Sends copy

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<i>transition 2</i>	July 1935	07/22/36	Letters III	To Viscount Carlow	Refs fragment of WIP published under title <i>Storiella as She Is Syung</i>
<i>The Times Literary Supplement</i>		09/17/36	Letters III	To B.W. Huebsch	Sends copy containing ad by Faber & Faber
<i>transition 26</i>	February 1937	12/01/36	Letters III	To Carola Giedion-Welcker	Refs no. in which fragment of WIP will come out.
<i>The Irish Times</i>	01/07/33	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	01/21/33	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	02/25/33	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	10/14/33	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	01/26/34	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	08/01/36	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	08/29/36	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The Irish Times</i>	07/16/36	08/17/37	Letters III	To C.P. Curran	Requests copy
<i>The House by the Churchyard</i> by Le Fanu		10/13/37	Letters III	To Frank Budgen	Asks if has marked, wants to see the passages.
<i>Verve</i> (Paris) 1.2: 26	March-June 1938	03/28/38	Letters III	To Carola Giedion-Welcker	Sends copy containing "A Phoenix Park Nocturne"
<i>Neue Zürcher Zeitung</i>		03/28/38	Letters III	To Carola Giedion-Welcker	Received copy

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>The Star</i> (London)		06/03/38	Letters III	To Viscount Carlow	Heard of good review of <i>Storiella</i> in; will order 2 copies if can learn the no.
<i>transition</i> 27: 59-78	April-May 1938	06/03/38	Letters III	To Viscount Carlow	Sends, with fragment of WiP
<i>Europe</i>	04/15/38	06/03/38	Letters III	To Viscount Carlow	Refs "James Joyce" by Jacques Mercanton
<i>Poètes de l'univers</i>		06/03/38	Letters III	To Viscount Carlow	Mercanton's "James Joyce" reprinted in (from <i>Europe</i> 15 April 1938)
<i>James Joyce und die Gegenwart</i> by Herman Broch	1936	03/05/39	Letters III	To Daniel Brody	Refs
<i>The Irish Times</i>		05/26/39	Letters III	To Sean O'Casey	Refs <i>Finnegans Wake</i> announcement that attributes the book to O'Casey
<i>The Observer</i>	05/07/39		Ellmann (722)		Review by Gogarty
(TITLE?)	June ? 1939		Ellmann (723)		Liked review of FW by Harry Levin best
<i>The New Republic</i>	June ? 1939		Ellmann (723)		Edmund Wilson's review of FW
<i>The London Times</i>	June ? 1939		Ellmann (723)		Leading article on FW
<i>Nineteenth Century</i> 26: 73-82	July 1939	07/22/39	Letters III	To Frank Budgen	Refs Alex Glendinning, "Commentary: <i>Finnegans Wake</i> "

Item	Item Date	Doc Date	Document	Correspondent	Notes
<i>Revue de Paris</i> 46.17: 227-35	09/01/39	09/08/39	Letters III	To Jacques Mercanton	Refs Georges Pelorson, " <i>Finnegans Wake</i> de James Joyce ou le livre de l'homme"
<i>Nouvelle Revue Française</i> 27.308: 858-64	05/01/39	09/08/39	Letters III	To Jacques Mercanton	Refs
<i>Panorame de la littérature anglaise contemporaine</i>	11/12/39	01/09/40	Letters III	To Jacques Mercanton	Refs
<i>New Directions in Prose and Poetry</i> ed. James Laughlin IV	1939	02/21/40	Letters III	To James Laughlin	Refs Harry Levin, "On First Looking into <i>Finnegans Wake</i> " (253-87)
<i>At Swim Two Birds</i> by Flann O'Brien	1939	02/09/40	Letters III	To Nino Frank	Says he liked it
<i>Osservatore Romano</i>	December 1940		Ellmann (739)		Insisted FW was spiritual and so countered realistic spirit of the 19th Century

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