

Machine Writing Modernism:
A literary history of computation and media, 1897-1953
by

Alex Christie
Master of Arts, Loyola University of Chicago, 2012
Bachelor of Arts, University of Illinois at Urbana-Champaign, 2010

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Supervisory Committee

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Abstract

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In response to early technologies of seeing, hearing, and moving at the turn of the twentieth century, modernist authors, poets, and artists experimented with forms of textual production enmeshed in mechanical technologies of the time. Unfolding a literary history of such mechanical forms, this dissertation sees modern manuscripts as blueprints for literary production, whose specific rules of assembly model historical mechanisms of cultural production in practice during their period of composition. Central to this analysis is the concept of the inscriptive procedure, defined as a systematic series of strategies for composing, revising, and arranging a literary text that emerge in the context of that text's specific political and technological environment; in so doing, inscriptive procedures use composition as a material act that works through a set of political circumstances by incorporating them into the signifying process of the physical text. As such, procedurally authored texts do not neatly instantiate in the form of the print book. Reading modern manuscripts instead as media objects, this dissertation applies the physical operation of a given old media mechanism as a hermeneutic strategy for interpreting an author's inscriptive procedure. It unspools the spectacular vignettes of Raymond Roussel, plays back the celluloid fragments of Marcel Proust, decrypts the concordances of Samuel Beckett, and processes a digital history of Djuna Barnes's editorial collaboration with T.S. Eliot. Rather than plotting a positivist literary genealogy, this dissertation instead traces an ouroboros mode of literary critique that emerges in its own wake, as digital experiments with textual manipulation reveal analog bibliographic arrangement procedures. Using the methods of contemporary scholarly editing to undertake a procedural archaeology of experimental literature, this dissertation unearths an analog prehistory of digital humanities practice, one that evolves alongside the mechanisms of old media as they lead to the advent of the digital age. In so doing, it unfolds a historicity of cultural form, one whose mechanical and ideological apparatuses participate in the development of early methods in humanities computing.

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Introduction: Machine Writing the Modernist Experiment

MANUSCRIPT INSCRIPTION AS MECHANICAL TRANSDUCTION

In response to early technologies of seeing, hearing, and moving at the turn of the twentieth century, modernist authors, poets, and artists experimented with forms of textual production enmeshed in mechanical technologies of the time. In 1899, Marcel Proust abandoned his late nineteenth-century manuscript, writing: "shall I call this book a novel?" ("puis-je appeler ce livre un roman?"). (181) Applying his understanding of the magic lantern and early film technology as a compositional technique, Proust had written his book in paper fragments that he strategically arranged to produce a chronological narrative. Edited like the transparent slides of the magic lantern, or frames on a film reel, Proust's manuscript fragments present, as Luc Fraisse writes, "multiple possibilities for composition, for decomposition or even recomposition...as if the novel we read were but one among many other versions of an original text, infinitely transformable or, moreover, transmutable" (les multiples possibilités de composition, de dé-composition ou de recomposition qu'offre le texte même de la *Recherche*, comme si le roman, tel que nous le lisons, n'était qu'une version parmi beaucoup d'autres d'un texte original indéfiniment transformable ou plutôt transmutable) (96). One can extend Fraisse's description of "many other versions of an original text" to argue that there is no original text, no textual center to Proust's manuscript, but that the manuscript instead constitutes a dynamic and reconfigurable textual system. This system models the mechanics of early film as Proust understood them.

At the same time as Proust was composing a book whose rules for assembly model the seeing technologies of his day, Stéphane Mallarmé experimented with poetry that mirrors a roll of the dice. One of the first instances of typographic poetry, "A Throw of the Dice" ("Un Coup de Dés"), arranges fixed words on the page such that they can be moved and reordered to form multiple written and spoken permutations. These experiments participate in a medial ecology (Hayles 2002) in which representative techniques develop across multiple media: filmic composition moves from the magic lantern and early film to Proust's manuscript, and montage, in turn, moves from Woolf's *Mrs. Dalloway* and Joyce's "Wandering Rocks" back into film. Or, perhaps more precisely, the montage form develops through the use of multiple representative materials (paper, film, etc.), each of which bring that form into physical contact with diverse environments for cultural production. The convergence of literary technique and mechanical technologies demonstrates Brian McHale's claim that "On the margins of mainstream modernism there were alternative machines, 'bachelor machines' as they have been called (Deleuze and Guattari 1983; de Certeau 1986), such as those of Alfred Jarry, Marcel Duchamp, Franz Kafka, and Raymond Roussel." (3) Following the turn of the century experiments of Proust and Mallarmé, Wyndham Lewis and F.T. Marinetti used algebraic symbols as grammatical operations, exploring the written work "as a system which is fundamentally mechanical, and capable of being atomized into elements available for recombination." (115) Through these and related Futurist and Vorticist experiments, the experimental constitution of text as machine responded to World War I through motile and machine-like poetry that expressed the war-torn city as a radical break from nineteenth-century experience. Later Dadaist and Surrealist cut-up techniques

rearranged artistic materials as a method for resisting the mechanical reproduction of the art object, extending artistic engagements with modern machines through the interwar period. From the early experiments of Roussel, Mallarmé, and Proust, through the artistic movements surrounding World War I and later Surrealist developments, modernist practice demonstrates a bibliographic engagement of text and machine that precedes digital computing. Following the line of reasoning that modernist authors used writing as an experimental process of working through political and technological changes of their day, this dissertation, through close readings of where, how, and why modernist texts change over time, charts an analog prehistory of the machine writing and reading of literary texts in the twentieth-century.

In this dissertation, I refer to literary objects that blend textual representation with mechanical assembly as machine texts. Modernist machine texts serve as experimental tools for critical insight, which are assembled and constructed to produce literary critiques through the physical and cognitive labor of an editor, as she builds the book according to its rules for assembly. Reading the content of such machine texts in concert with the editorial operations undertaken by their authors, this dissertation turns its hermeneutic attention to such authors' physical production techniques. While this practice is traditionally associated with the *bricolage* and assemblage of built media artists and Surrealist practitioners, including Joseph Cornell's creation of shadow box dioramas out of found objects, it additionally extends to the experimental texts of modernist authors. Proust's *Jean Santeuil* functions as such a text, recreating the juridical procedures of late-nineteenth-century France at the bibliographic level. Proust's theory of time sees the individual as a series of successive selves, inspired by the realization that the moving

image is composed of a series of individual frames. (Fraisie 296-297) These individual frames were composed as narrative fragments that Proust edited together to produce his stories. However, Proust's editorial process becomes explicitly politicized in response to the Dreyfus Affair, which is recounted in *Jean Santeuil* as it replicates the documentary and juridical attempt to reconcile conflicting testimonial accounts of Dreyfus's actions. Proust's manuscript contains multiple unedited fragments expressing conflicting opinions of his characters, making any attempt to arrange and edit the novel an exercise in weighing and evaluating conflicting accounts of the novel's controversial political characters. In this way, *Jean Santeuil* functions as a dynamic textual environment whose hermeneutic process enables, as Patrick Jagoda writes of procedural arguments, "[an awareness], on a phenomenal level, of processes and procedures, rules and limitations that characterize the historical present." (761) The role of *Jean Santeuil* as a tool for critical insight lies in the ability of its rules for assembly to approximate the rules and procedures of the Dreyfus Affair, through a process of material and hermeneutic transduction. I argue that the compositional methods of specific modernist authors engage in this process of transduction, reconstructing specific cultural and political protocols as procedures for documentary inscription. As I define the term, an author's inscriptive procedure refers to a systematic series of strategies for composing, revising, and arranging a literary text that emerge in the context of that text's specific political and technological environment; in so doing, inscriptive procedures use composition as a material act that works through a set of political circumstances by incorporating them into the signifying process of the physical text. I see manuscripts as blueprints for literary

production, whose specific rules of assembly model historical mechanisms of cultural production in practice during their period of composition.

CRITICAL CONTEXT: PROCEDURAL INTERPRETATION IN THE HUMANITIES

I. Algorithmic Reading Before the Computer

While modernist combinations of text and machine emerge as early as the late nineteenth century, through Raymond Roussel, Stéphane Mallarmé, and Marcel Proust, existing criticism on the mechanical sorting and arranging of texts focuses exclusively on practices that emerge alongside digital computing. Marie-Laure Ryan cites Oulipan combinatorics as one of the first instances of mechanically rearranging and reshuffling texts, writing: "This work consists of twelve sonnets cut into strips at every line and bound together at the spine, allowing new poems to be created by leafing through the book and combining the fragments." (418) This and related Oulipan experiments impose linguistic and bibliographic constraints as a mode of speculation and permutation, producing multiple potential versions of a given text. Through their use of constraint to produce multiple overlapping, intersecting, and divergent versions of a single text, Oulipan practices diverge from earlier forms of constrained writing used to produce a singular, often poetic, outcome, through metrical, lyrical, and formal rules for composition. For instance, Georges Perec's *La vie mode d'emploi* houses multiple potential narratives within its singular novelistic structure; similarly, Raymond Queneau's *Exercices de style* contains 99 retellings of the same scene, written according to 99 different stylistic constraints. Arguing that these practices emerge alongside digital

computing, Anastasia Salter suggests: "Constrained writing uses seemingly procedural and algorithmic methods to reveal the unexpected and, in doing so, to interrogate the relationship between the work and the means of digital media." (535) Rather than being mere syllogism, algorithmic and Oupilan approaches to writing evolved together, demonstrated through both literary and computational experiments in reordering literary texts. Such experiments include the Oulipan use of programming languages to author algorithms for poetic production; Paul Braffort, for instance, wrote an oulipan computer program to automatically generate aphorisms using APL (A Programming Language), developed by IBM in the 1960s. (Wolff n.p.)

The rule-based transformation of text to produce interpretive meaning, commonly referred to as algorithmic criticism, is a core practice of computational approaches to literary study (Ramsay). Developed during the same early digital period as Oulipan combinatorics, Roberto Busa's *Index Thomisticus* is widely cited as the first instance of using digital computation to sort and arrange literary texts. Stephen Ramsay traces a direct link between Busa's literary reordering and contemporary algorithmic methods, writing that Busa

in the late 1940s undertook the production of an automatically generated concordance to the works of Thomas Aquinas using a computer. The founding moment was the creation of a radically transformed, reordered, disassembled, and reassembled version of one of the world's most influential philosophies...Undertaking such transformations for the purpose of humanistic inquiry would eventually come to be called 'text analysis,' and in literary study, computational text analysis has been used

to study problems related to style and authorship for nearly sixty years. (1-2)

In contemporary practice, Ramsay's algorithmic criticism, as well as big data approaches to literary study, including topic modeling and network analysis, break-up and rearrange linguistic components of novels as a mode of critical inquiry. The critical practice of machine reading texts therefore emerges through modernist combinations of text and machine, an experimental practice whose fin-de-siècle roots are almost universally overlooked.

Recasting pre-digital forms of non-linear composition as digital and algorithmic *avant la lettre* not only risks anachronism, but further elides the compositional act as one whose procedures emerge out of a specific material environment. Deployed in the contexts of digital computation and text analysis, the term "algorithm" refers to a repeatable set of rules deployed to produce a specific outcome. As Bethany Nowwiskie explains: "The term algorithm, most commonly associated with computer science, may be used for any effective procedure that reduces the solution of a problem to a predetermined sequence of actions." (1) As a subset of a procedure, an algorithm defines a specific set of rules that produces constrained, repeatable outcomes. By way of contrast, procedures refer to interlocking sets of rules and regulations used to produce various and indeterminate outcomes in systematic fashion. While procedures may be translated into digital algorithms, they need not be digital, themselves; Robert's Rules of Order is a bureaucratic procedure through which political and organizational information is sorted and organized, for instance. As they manifest in actions, organizations, and documents, procedures therefore determine the authorship of representation (political, documentary,

or otherwise). As Jonathan Lessard writes: “The adjective procedural describes an object whose actual manifestation results from the strict application of a specific set of rules (or procedures) to a particular context. The main interest of procedural objects is their ability to generate varying content in response to changes in input and setting.” (407) Engaging in critiques of procedural representations therefore unmask that representation's authorship as enmeshed in the material practices that influenced its creation. The procedural reconstruction of artistic representation corresponds to specific sets of material enactments that construct the art object's cultural and political significance, or, as Louis Althusser argues: “an ideology always exists in an apparatus, and its practice, or practices. This existence is material.” (155) From this perspective, arrangement procedures materialize the art object's ideology and, as such, play a central role in constructing and critiquing that object's cultural context. Such contexts are actively constructed by the physical actions of the editor, whose bibliographic operations call into existence the metaphorical action of a given cultural apparatus.

Whereas the algorithmic transformation of text, including Busa's *Index* and Oulipan combinatorics, emerges alongside digital computing, the procedural composition of text extends throughout the first half of the twentieth century. Ramsay cites Alfred Jarry's pataphysics and Dada's cut-up as early predecessors to Oulipan writing under constraint, writing: "Queneau's unusual sonnet sequence bears an obvious resemblance to the Dadaist technique of cutting up poems and reassembling them into new formations, but there is little of the anti-art rhetoric of Tzara in Queneau's work. Tzara's poems seek to destroy; Queneau's to create." (27) Rather than marking a distinction between artistic creation and destruction, I instead read the divide between pre- and post-digital forms of

textual assembly through the distinction between procedure and algorithm: the post-digital constraint of Oulipo results in one finite set of textual manifestations, whereas the procedural design of their pre-digital counterparts engages the editor in the process of artistic creation, incorporating that editor as an active agent in the process of constructing a representation, rather than presenting her with a representation whose algorithmic assemblage requires a machine as its author. Unlike the digital algorithms of the Oulipans, which relied on a computational platform to assemble a recombinant narrative, the analog procedures of machine texts require the editor to physically assemble and compile a text by hand. To this end, the modernist machine texts of Proust, Roussel, Beckett, and others, deploy repeatable strategies for assembling their literary representations, in a pre-digital form of what Ian Bogost calls procedural rhetoric. As Bogost writes, "Procedural representation itself requires inscription in a medium that actually enacts processes rather than merely describe them." (9) While studies of procedural representation, including Bogost's scholarship, focus on computers as the only medium that "represent[s] process with process," I focus on the material book as an analog site of rule-based representational construction, whose bibliographic properties may be manipulated and recombined in procedural fashion. This process of textual and material manipulation, as it is constructed by and preforms specific political and technological modes of production, emerges through the juncture of ideology, inscription, and hermeneutics. As Johanna Drucker writes of modernist experimental representation: "Rejecting the original as somehow other and elsewhere, insisting on the presence of the work in the form, as an ongoing process of signifying activity in which the reader/viewer participates, manifests the notion of a presentational rhetoric in the inscription of a figural

form always in formation." (151) Through its break with realist modes of knowledge representation, modernist technique locates the process of representation as participatory action through which the reader gains knowledge of that which is represented. Whereas digital forms of text analysis and versioning, including Busa's *Index*, relegate such actions to the automatic mechanisms of a computer, modernism's machine texts derive their material signification through the act of human assembly. This is a critical practice that emerges from a long history of humanist inquiry, rooted in the histories of the book.

II. Procedural Approaches to Scholarly Editing

The tradition of scholarly editing carries with it established methods for examining and compiling multiple states of textual arrangement. In particular, contemporary theories of textual scholarship—advanced by practitioners including Jerome McGann, Peter Shillingsburg, Sukanta Chaudhuri, and Dirk Van Hulle—examine multiple instantiations of a given work created through textual difference, emphasizing scholarly editing as an interpretive act that produces one among many possible views of the work. In his analysis of W. W. Greg, Sukanta Chaudhuri suggests: "Editorial action does not reduce or neutralize the unstable, expansive tendency of the text, but draws it into its own operation." (106) Reading Greg as an early advocate of textual multiplicity, Chaudhuri emphasizes the active work of editorial operations or functions upon the text that construct an interpretive, persuasive view of the work. Jerome McGann extends the operations of scholarly editing to a key rubric for locating and evaluating sites of textual change in *Radiant Textuality*, where he writes:

In what I would call a quantum approach, however, because all interpretive positions are located at “an inner standing point,” each act of interpretation is not simply a view of the system but a function of its operations. . . . Its most important function is not to define a meaning or state of the system as such—although this is a necessary function of any interpretation—but to create conditions for further dynamic change within the system. (218)

McGann proposes a more radical iteration of Greg's early editorial operations, suggesting that, by viewing the work as a dynamic environment capable of multiple states, interpretations, or editorial "views," the editor creates an operable, interactive system in which users can explore the multiple permutations of the original work. McGann's articulation of the work as an n-dimensional space additionally suggests that the possibilities of textual rearrangement are determined by operations specific to the given work. John Bryant extends this approach to textual change through his concept of *The Fluid Text*, which emphasizes the work across states of successive change, rather than separating the work into individual, separate instances or witnesses. These and other contemporary editorial theories construct an intimate connection between scholarly editing and digital computing, arguing that the dynamic operations of scholarly editing can and should be communicated through electronic environments. McGann and Drucker's Ivanhoe Project, recently revived as a WordPress plugin, uses scholarly speculation to produce multiple versions of a given text online. Elsewhere, Neil Fraistat and Steven Jones explore textual operations in electronic environments through their concepts of "Immersive Textuality" and "architextuality." Across these and related

projects, the dynamic procedures of scholarly editing are communicated through game-like environments that explore the "expansive tendency" of the text through speculation, permutation, and variation. While these connections between scholarly editing and digital computing emphasize a mutual investment in interpretation, performance, and multiplicity, this dissertation instead considers the acts themselves through which this multiplicity is realized. If scholarly editing is premised upon material acts through which the editor crafts specific experiences or interpretations of the work, the dynamic operations of electronic environments can communicate and expand the operations of textual scholarship. This project deploys such dynamic operations as a procedural hermeneutic, combining genetic and expansive theories of the text to recover modern manuscripts as procedurally authored objects. Doing so unearths the changing interplay between text, image, sound, and page as a physical structure, one whose design preserves the ideological architecture of twentieth-century cultural production.

III. Material Metaphor

Reading the manuscript as a procedural artifact requires reassessing text based readings of modernism and machines, shifting modernist studies' existing focus on the formal features of mechanical literature to a forensic analysis of the literary metaphor. (Kirschenbaum 27-29) Rather than being complete and reachable in automated algorithmic fashion, modernist representation exists always in formation, as a process undertaken as the reader constructs a text across multiple representative systems (linguistic, bibliographic, aural, visual, and procedural). While stylistic experimentation, including literary cubism and stream of consciousness, invites the reader to piece together

that which is represented in metaphoric fashion, bibliographic and typographic experimentation extends this practice to the material page. As Drucker writes of Apollinaire: "The calligramatic activity is fundamentally at odds with a normative literary mode, and its deceptively facile visuality is in actuality the material site in which the activity of ongoing signification occurs." (151) Drucker's comment on the calligram can be extended to related bibliographic experiments, reaching back to Mallarmé's "Coup de Dés" and forward to Surrealist parlor games—across these modernist experiments in rearranging texts, specific strategies for arranging and recombining text serve to, as Drucker writes, "make a revelation, rather than serve as its representamen." (144) Such modes of literary making emerge through the physical enactment and unfolding of literary procedures. Like the operator of a telephone switchboard or a railroad switch, the reader physically operates specific cultural and technological mechanisms as they are instantiated in a given machine manuscript. The experimental manuscripts examined in this dissertation emerge as machines only once operated and engaged by the physical operations of an editor, operations which are apprehended metaphorically through the readerly deployment of a procedural hermeneutic. Such operations replicate the physical logic of old media, constructing hermeneutic procedures that transduce the operation of old media technologies and their corollary logics of implementation in government and industry: unspooling (the kinoscope and the rotary press), playing (the magic lantern and early film), and decrypting (microfilm documents and encoded wireless transmissions).

While modernist studies do examine mechanical modes of representation in literary texts, current criticism focuses exclusively on the formal features of such

representation, treating the machinic qualities of modernist literature as metaphorical and metaphysical. Beatrice Monaco's *Machinic Modernism* examines the literary machines of Woolf, Lawrence, and Joyce. However, Monaco's criticism examines only linguistic machine operations described by the book, rather than examining the physical book as a signifying machine. As Monaco writes of Joyce's cinematic representation:

we frequently see the use of 'gentle' adverbs like 'quietly', 'calmly' and 'soberly' with reference to Bloom, particularly in terms of his eye or gaze. These adverbs act mechanically; they enact the neutral, removed transparency of the camera gaze by causing a subtle lapse and offsetting and framing, so to speak, the kinesis of the action. This technique allows non-human, heterogeneous phenomena to 'speak' in spite of human presence, and to exist as if autonomously. (103)

While Monaco's book does examine Joyce and Woolf's texts as machines, it only does so through a look at hermeneutic strategies, treating the mechanical as a purely formal construct, rather than a discrete set of physical procedures used to make texts mean. By way of contrast, Paul Benzon's 2010 *PMLA* article "Lost in Transcription," reads Andy Warhol's writing strategies through his use of the typewriter. Benzon situates writing technologies as confluent with media studies, expanding upon the criticism of Friedrich Kittler, which reads the standardization of handwriting and typing as part of the translation of human physiology into information technology, alongside the development of optics and acoustics (44). Extending Kittler's informational reading of the typewriter to postmodern fiction, the essay unpacks Warhol's play with spelling and misspelling as a set of physical interactions enmeshed in the technological and cultural circumstances in

which Warhol wrote: "spelling becomes newly important and problematic within [Warhol's] context: it is both a mental response to learned rules and a physical sequencing of keys and letters." (94) As Benzon's essay demonstrates, attention to the material process of composition reveals how the physical page exists as a political and procedural construct, one whose physical and textual organization is enmeshed in corollary logics of organization and production practiced by a given institution (in this instance, the American corporate office). However, Benzon's analysis of Warhol situates the typewriter in the emerging informational architecture of the bureaucratic office. As such, Benzon's approach treats act of composing text as fundamentally divorced from critiques expressed through such text, rather than an essential component of a document's means of signification. As Benzon writes:

In foregrounding standardized error as the central characteristic of typewriting's materiality, I have attempted to offer a theory of this embodied, multiauthorial condition as capable of existing across, and indeed of complicating, simple boundaries between collaboration and contestation, intentionality and contingency, the biological and the technological, the literary and the corporate, and, perhaps most important, between writing as a material product and as an immanent process...In this system, the materiality of text manifests itself in the overwhelming probability of local, idiosyncratic disruptions rather than in any larger predetermined horizon of aesthetic, subjective, or political possibility. Widespread as these disruptions are in the immanent practice of typing, they are almost nowhere to be found in most finished texts; indeed, these

disruptions in many ways constitute the condition of possibility for the finished status that supersedes and erases them. (104-105)

Benzon's attention to the finished text demonstrates an algorithmic approach that anchors material acts of compiling critique and representation in an electromechanical platform, rather than the embodied cognition of a human operator. The finished document exits as an artifactual product of a specific bibliographic and bureaucratic environment—here, the office—rather than a dynamic system whose changing properties over time work through the ideological apparatuses that constitute its circumstances of production.

Bringing textual studies in general, and genetic criticism in particular, to bear on media studies approaches to modernism's machine texts, reveals where and how variance across the instantiations of a literary work does indeed manifest aesthetic, subjective, and political concerns. As Brian McHale writes of Roussel's signifying machines: "A Roussel machine is always, apart from anything else, a kind of scale model or mise-en-abyme of the procedures by which the text housing it was itself produced; for, as Roussel revealed in his posthumous poetics, *Comment j'ai écrit certains de mes livres* (How I wrote certain of my books), these texts were not 'freely' composed but produced by the operation of mechanical techniques for generating and/or manipulating bits of language." (3) As McHale suggests, rather than serving as a deterministic method for producing a finished text, machinic composition subverts the very notion of textual completion, revealing the act of composition as a site for exploring the multiplicity of signification present in the work. From this perspective, the modernist machine work emerges not as a complete product divorced from its modes of production, but rather as a series of potential texts whose linguistic and bibliographic properties can be restructured, by hand, in procedural

fashion. Examining the specific strategies used to produce the multiple textual states of the machinic work reveals politicized modes of navigating and assembling textual representation. Like the early operators of the magic lantern, the rotary press, and the gramophone, such machines incorporate the embodied cognition of a human operator into their signifying structures. As the labor of the Fordist worker structures the logic of the assembly line, so too do the functions of the editor drive the apparatuses that transduce modern manuscripts into media objects.

ARGUMENT: PROCEDURAL INTERPRETATIONS OF MACHINE MANUSCRIPTS

I. The Manuscript as Medium

Applying specific mechanisms of artistic production to the physical manuscript compiles the literary document as a media product. Such analog experiments in the machine-like production of text are preserved through modern manuscripts, which document specific rules for textual generation, combination, and revision, demonstrating Daniel Ferrer's argument that "the draft is not a text...it is a protocol for making a text...a set of instructions." (261) Echoing Ferrer, Dirk Van Hulle sees manuscripts as cognitive environments, working materials for literary experiments through which novelists develop specific procedures for documentary inscription and revision. Building on the genetic textual criticism of Ferrer and Van Hulle, this dissertation examines reconfigurable modernist novels that enact and perform specific technological and political developments of their time. From this perspective, it advances a materialist hermeneutic for modern manuscripts that reads textual production as an action that instantiates cultural and political phenomena through their apparatuses of documentary

inscription, resulting in specific forms of textual arrangement recoverable via documentary traces in archival materials. This approach implements what Katherine Hayles calls medium-specific analysis to examine the modes of textual engagement afforded by the properties of a given manuscript. As Hayles writes,

Materiality thus emerges from interactions between physical properties and a work's artistic strategies...[it] depends on how the work mobilizes its resources as a physical artifact as well as on the user's interactions with the work and the interpretive strategies she develops—strategies that include physical manipulations as well as conceptual frameworks. (33)

Deploying a medium-specific approach to modern manuscripts, this dissertation reads manuscripts as confluent with media. In so doing, it argues that the dynamic interplay between the textual, visual, aural, and material components of a text, as determined by a given author's strategies for mechanical assembly, transduce the workings of specific media technologies engaged by the text. These strategies replicate political and cultural mechanisms at the bibliographic level, making textual assembly a signifying act that calls the politics of the page into being. Such strategies cross literary and artistic modes of production in the modernist period. Marcel Duchamp, for instance, wrote a *Manual of Instructions* containing specific rules for assembling and reconstructing his built media artwork, *La chute d'eau/le gaz d'éclairage*. These instructions call into operation the physical properties of Duchamp's physical art, as the procedures for assembling a given manuscript equally constitute its metaphorical instantiation as a media object.

Interpreting such bibliographic procedures requires recovering the manuscript as manual of instructions to be compiled by a reader and reconstructing the book as its assembled

object (a formal strategy that is traditionally associated with Oulipian novelists, such as Georges Perec, though, as this dissertation argues, is equally present in the material production of pre-digital modern manuscripts).

II. The Book as a Procedural Object

Combined with an awareness of textual multiplicity, genetic criticism can decode and unlock the bibliographic mechanisms of modernism's machine texts. As it deploys specific rules for instigating material change in texts in order to produce and communicate arguments about how those texts function, the interpretive act of scholarly editing also operates as a hermeneutic procedure. While contemporary textual scholarship demonstrates the procedural nature of reading material texts, this dissertation further examines material manuscripts which are, themselves, procedurally-generated. Rather than deploying a procedural hermeneutic to the text following its authorship, I instead draw from the tradition of dynamic theories of the text to examine how and where modernist texts themselves deploy editorial procedures as a mode of literary expression. While contemporary textual criticism compares multiple instantiations or witnesses of the work and genetic criticism examines the traces of compositional strategies used to produce textual difference, I combine these fields to read and reconstruct the procedural logic of manuscript composition (specifically as it transduces historical logics of cultural production). To be sure, while contemporary scholars cannot inhabit the experience of modernist authors and textual scholarship cannot recover authorial intention, manuscript studies can recover specific forms of textual interaction as their traces remain inscribed in archival documents. This dissertation therefore reconstructs historical modes of textual

assembly as they are preserved in experimental manuscripts. Through its emphasis on communicating procedural arguments using archival materials, electronic scholarly editing offers an electronic context for recovering pre-digital forms of procedural composition without conflating the analog manuscript with its electronic expression. This approach uncovers the manuscript as a media artifact that preserves the cultural mechanisms of medial ecologies past.

III. Procedural Archaeology

Extending the materialist approaches of Drucker, Hayles, McGann, and Matthew Kirschenbaum to archival materials, this dissertation's procedural hermeneutic locates the material signification of a manuscript page in the specific mechanisms of cultural production it documents. While existing studies of modern manuscripts, including George Bornstein's *Material Modernism* and Hanna Sullivan's *The Work of Revision* examine addition and excision as compositional strategies used to produce textual difference, they do not account for the roles composing and arranging text play in making that text mean, specifically as that meaning is enmeshed in coeval modes of material arrangement. In response to manuscript studies that see materiality as a method that accounts for differences in literary expression, my dissertation takes a genetic textual criticism approach to examine material strategies for composition that serve as a mode for constructing literary representations, and as such reveal the book to materially enact, perform, and critique methods of documentary production in practice at its time of authorship. Furthermore, preserving manuscript materials in online environments requires accounting for the forms of textual production they document, rather than simply

reproducing the visuality of the material page on a digital screen. To this end, my dissertation extends contemporary methods for electronic scholarly beyond the pragmatics of image reproduction and collation to additionally account for the importance of material arrangement and procedural representation in manuscript studies. In so doing, this project uses theories of textual editing to undertake a procedural archaeology of the literary document, treating the manuscript as a cultural object that preserves the specific technological, cultural, and political procedures of a given medial ecology. Undertaking a procedural archaeology of manuscripts authored in each decade of the modernist period, from the 1890s to the 1940s, this dissertation ultimately reconstructs a literary history of procedural representation, one that precedes the early forms of algorithmic text analysis and electronic scholarly editing that (emerging from Roberto Busa's *Index Thomisticus*) shape the emergence of the digital humanities. Using the procedural methods of contemporary scholarly editing to undertake a documentary archaeology of textual manipulation, this dissertation unearths an analog prehistory of digital humanities practice, one that evolves alongside the mechanisms of old media as they lead to the advent of the digital age.

CHAPTER OUTLINE

This dissertation traces the emergence of literary experiments in procedural criticism, beginning at the close of the nineteenth century and extending into the late modernism of Beckett. It concludes by examining the emergence of algorithmic criticism in the postwar period, theorizing the role of digital methods in recovering pre-digital forms of textual materiality. Rather than charting a positivist literary genealogy, this dissertation instead

traces an ouroboros mode of literary critique that emerges in its own wake, as digital experiments with the procedural text reveal analog forms of textual manipulation. Reading modern manuscripts as procedurally authored media objects, this dissertation applies the physical operation of a given old media mechanism as a hermeneutic strategy for interpreting a given author's inscriptive procedure. Chapter one unspools the writing of Raymond Roussel as both an early Edisonian spectacle (a kinoscope) and a mass manufactured journal publication (a rotary press). In so doing, it unpacks the concept of the inscriptive procedure through a historical analysis of Roussel's book production techniques. Tracking these procedures as they shape the formal features of multiple media, the second chapter plays Proust backwards, splicing and concatenating Proust's manuscripts as magic lantern séances (early films) and contradictory public testimony (scandalous and sensational courtroom documents). Rewinding Marcel Proust's compositional methods alongside the documentary and bureaucratic procedures of turn-of-the-century France, this chapter recovers the procedural politics of the Dreyfus Affair in Proust's compositional trials. Chapter three decrypts Samuel Beckett's indexical writing as a memex, tracking the emergence of textual manipulation via narrative encoding and encipherment during the code war of the 1940s. Anticipating the construction of Busa's *Index*, this chapter's decryption exposes the use of concordance to reconstruct imagined and alternative histories during World War II. Carrying out the conclusions reached in this chapter, the fourth chapter processes the analog writing of Djuna Barnes in light of digital methods for textual versioning. While chapter three puts forth a theoretical argument that digital computing created versioned historical narratives, the fourth chapter implements this argument in practice by creating and critiquing a

digital history of Djuna Barnes's collaboration with T.S. Eliot through the production of *Nightwood*. Following this case study, the conclusion considers emergence of digital humanities practice alongside Oulipian compositional methods. It ultimately argues that the mechanisms of a given digital platform frame and transcode the forensic logics of an analog textual system, making digital editions of experimental manuscripts procedural palimpsests. Following from this conclusion, this dissertation closes by advocating the incorporation of physical arrangement procedures into the design of digital representations of analog manuscripts.

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Unspooling Roussel's Spectacle: Mass media and the manuscript

In a striking prolepsis to Father Roberto Busa's development of the *Index Thomisticus*, Raymond Roussel details the experimental recombination of a famous first edition in his *Impressions d'Afrique*. In the scene, a scientist named Louise and an architect collaboratively construct Louise's secret laboratory, where she is producing a photo-mechanical machine to automatically reproduce visual images as drawings on a special canvas. While Louise's reproduction machine anticipates the digital reproduction of sight and image through the lens of mechanical optics (the kinetograph), her collaborative strategy for building the experimental conditions under which this machine is produced equally anticipates Busa's early digital text analysis. Louise's bright assistant offers a rare first edition of Walter Scott's *The Fair Maid of Perth* as material for filtering the sunlight in Louise's makeshift lab: "The over a century old pages were completely yellowed and could serve to subdue and control the blinding clarity of the African sun" ("Les pages vieilles de plus d'un siècle étaient complètement jaunies et pouvaient servir à tamiser et à ternir l'aveuglante clarté du soleil africain"; Roussel 427). Here, the book becomes useful not purely for its textual content (or what Jerome McGann calls the linguistic code of the text), but also the material properties of the book itself (this includes the bibliographic properties, or code, of the book, but also the material properties of its paper, which are uniquely suited to the environmental conditions of Louise's lab). Repurposing the book pages as design materials, the architect cuts the book pages in the form of window panes, creating multiple opaque panes of multiple lengths, and uses the paper panes to construct a roof designed to perfectly filter the African sun

such that Louise can produce her mechanical reproduction machine the lab. Since the machine uses light sensitivity to detect (and reproduce) images, it must operate under dim light conditions. Here, the machine's capacity to automatically reproduce any visual image becomes directly tied to the material conditions of Scott's first edition pages. Although the text of Scott's novel does not figure into the process of automatic reproduction, the material procedure of deconstructing and recombining the book itself does. Scott's book drew upon multiple sources in order to reproduce a narrative account of the historical events of the battle of Perth, and was critiqued for its historical inaccuracies. It is telling, then, that a book whose purpose was to reproduce material events on a textual page becomes, in turn, textual material used to create a reproduction machine. The book, both in its content and its role as a piece of experimental material, draws attention to its own problematic status in the fidelity of representation (not only does the text of the book falsely represent the history of the battle of Perth, but the book also becomes a key element in the question of whether or not Louise's reproduction experiment will succeed or fail). While Louise's experiment certainly does not manipulate texts in the same way as Busa's, both pre-digital experiments do break-up and rearrange components of historical texts to produce multiple, indeterminate representations. Such indexical reconfigurations of written thought recall the development of the index itself, which, as Ivan Illich argues, allowed twelfth century scholars to submit the written word to their own mental (re)formations of its structure for the first time:

Without any application to indexing purposes, the a-b-c- sequence maintained any intense resistance to change for centuries. Since the dawn

of history it remained, fundamentally, as fixed as the shapes of the Greco-Roman letters. The non-use of this sequence for subject listing is therefore a quite remarkable and significant fact. It no more occurred to eight-five generations of alphabet users to order things according to an a-b-c- than it has occurred to the makers of the Encyclopedia Britannica to arrange articles by their references to the chapters and verses of the Bible. (103)

While the development of the index, as Illich describes it, allowed for the formal arrangement of text, Roussel and Busa's experiments show such formal experiments extending beyond the book form. Just as Busa used the mechanical calculation of concordance to produce a dynamic edition of Thomas Aquinas's *Index*, so too does Louise cut up and reconstruct Scott's book in order to produce a mechanism that can reproduce any visual image.

Across these instances of literary recombination, the ability to produce multiple representative outcomes is contingent upon the systematic unbinding and recombination of book fragments. Both Busa and Roussel transform representation from a narrative action to a procedural one, in which the signifying function of books is not constituted solely through the linguistic code of the text, but rather through the systematic recombination of the material text according to specific experimental rules.¹ As Annie-Marie Amiot explains:

Words produce themselves and multiply, combine and substitute for one another, each time enabling a new tale. Bedu's weaving loom is the strict equivalent of Louise Montalescot's painting machine: it is always a question of infinite combinations departing from a number of finite

elements given by the initial equations. Phonemes, signs, propositions of phrases are indeed the formal levels of the "mechanics" of language: drive belts and threads that Roussel frequently dramatizes during the spectacle of unmatched spectacle presented to the emperor Talou-Yaour.

Les mots s'engendrent et se multiplient, se combinent et se substituent permettant à chaque fois un nouveau récit. Le métier à tisser de Bedu est le strict équivalent de la machine à peindre de Louise Montalescot: il s'agit toujours de combinaisons infinies à partir de ce nombre fini d'éléments donnés par les équations de départ. Phonèmes, signes; propositions ou phrases sont bien les niveaux formels de la "mécanique" du langage: courroies de transmission et trames que Roussel met en scène fréquemment lors du spectacle des Incomparables présenté à l'empereur Talou-Yaour. (145)

By positioning a book criticized for its accuracy as a key element in the experimental reproduction of images, Roussel suggests there may be something procedurally amiss in the land of textual representation. And indeed, the very title of Roussel's *Impressions d'Afrique* plays upon the relationship of writing to seeing, since "impression" can at once refer to the visual image of a spectator, the print production of a book, and also the material marking of ink upon a page.² Louise's machine plays upon this wordplay embedded in Roussel's title, since it converts visual impressions into impressed marks upon a slab of marinated wood produced using a mechanical arm. Just as Busa's *Index* demonstrates how the act of composing and rearranging text can produce multiple

linguistic outcomes (multiple narratives), so too does Roussel's thematic manipulation of book materiality suggest that textual artifacts perceived as stable are, in fact, enmeshed in complex systems of indeterminate textual production. By calling the representative fidelity of Scott's book, Louise's machine, and his own *Impressions* into question in one fell swoop, Roussel dislocates reading from the site of textual and linguistic signification to the site of bibliographic production and transmission. Through the construction of texts authored in procedural fashion, Roussel introduces a corollary procedural hermeneutic that sees the material text as a key for unlocking the material mechanisms of its own production.

The trope of unlocking, decoding, and decrypting runs throughout Roussel's work, particularly his novels *Impressions d'Afrique* and *Locus Solus*. Published serially in 1910 and 1914, these novels are both composed through strings of descriptive vignettes that describe fantastical and surreal mechanical reproduction machines. *Impressions d'Afrique* chronicles the experiments of a group of European travelers who become shipwrecked in Africa and are taken in by the emperor Talou-Yaour. As Roussel describes the spectacular experiments the Europeans produce under Talou's watchful eye, the narrative begins to reveal sets of artistic constraints imposed upon their experiments beyond those immediately described or represented by Roussel's fiction. Similarly, *Locus Solus* follows a series of spectators who have been invited to the estate of Martial Canterel; here, each chapter describes a different spectacle unveiled by Canterel, including a self-propelled balloon that creates lawn art of out teeth, a swimming pool in which a hairless cat interfaces with the brain of a corpse, and, as the centerpiece of the novel, a series of twelve set-pieces in which a different corpse has been reanimated,

reliving the most emotionally significant moment of its life over and over again. Across both novels, Roussel's spectacular combinations of science and magic are governed through specific procedures for artistic production and duplication, calling into question the representative status of Roussel's own writing. As Brian McHale writes of Roussel's surreal art machines: "A Roussel machine is always, apart from anything else, a kind of scale model or *mise-en-abyme* of the procedures by which the text housing it was itself produced." (3) As I argue, Roussel's fantastical machines operate both as fictitious descriptions meant to entertain his readers and as physical, material *impressions* on paper that call into question the relationship between writing, reproduction, and spectacle in the early twentieth century. Christelle Reggiani notes the reflexive nature of Roussel's writing, which constantly draws attention to the mechanical nature of its own material production:

... in these moments where the work presents us with a fictional corpus, its "material content" is no other than the nature of the text itself, inscribed at the heart of the fiction; in other terms, the book, since it is the material instantiation of the text, would make possible its narrative insertion, it would become, in a way, [its own] fictional avatar.

...en ces moments où l'oeuvre nous présente un corpus fictionnel, sa "substance du contenu" n'est autre que la nature textuelle elle-même, inscrite au sein de la fiction; en d'autres termes, le livre, parce qu'il est l'apparaître matériel du texte, rendrait possible son insertion narrative, il en serait, en quelque sorte, l'avatar fictionnel. (159)

The metafictional, reflexive nature of Roussel's writing invites comparison to his childhood neighbor, Marcel Proust, and indeed "The curious similarity between the temperament and work of the two men (Roussel seeming a kind of dark and distorted reflection of Proust) has often been noted: Cocteau, for instance, called Roussel 'the Proust of dreams.'" (ix)

The metafictional role played by cryptography and textual deformation in Roussel's novels has invited many to speculate that Roussel encrypted a secret message within his works, a suspicion that particularly resonates with an author who could recite the entirety of *Locus Solus* from memory.³ John Ashbery confirms:

Many writers, including André Breton and Jean Ferry...have felt that Roussel hid some secret meaning or message in his work. Breton (in his preface to Ferry's book) makes a convincing case for Roussel as an alchemist whose books are coded messages concealing *Le Grand Oeuvre*—the Philosopher's Stone...But, if it seems possible that Roussel did bury a secret message in his work, it seems equally likely that no one will ever succeed in finding out what it is. What he leaves us with is a work that is like the perfectly preserved temple of a cult which has disappeared without a trace, or complicated sets of tools whose use cannot be discovered. (xxii)

The belief that Roussel's novels operate not solely as literary texts, but also as cryptographic locking-mechanisms which must be properly positioned and reordered to decode their secret meaning echoes the legacy of another experimental modernist, Stéphane Mallarmé. In *Le Nombre et la sirène: Un déchiffrement du Coup de dés de*

Mallarmé, Quentin Meillasoux argues that there is a literal secret number encoded into the text of Mallarmé's poem, in turn undertaking a procedural reading of the number's claims to truth. Whereas Meillasoux offers a numerical decoding (*déchiffrage*) of the number in Mallarmé's poetry, I take up the act of textual inscription, duplication, and print production (*impression*) in *Impressions d'Afrique* and *Locus Solus* to decrypt Roussel's texts. Rather than unlocking a specific, secret message hidden in these novels, I instead consider how and where both novels model reading procedures based in textual manipulation and cryptography, and apply these procedures to Roussel's own novels to decrypt and unlock their mode of textual expression. Ultimately, Roussel's novels do not serve primarily as descriptive or representative texts, but instead as bibliographic machines that transmit and transmediate the mechanized apparatuses of their own physical production. Decrypting Roussel's writing not (only) as language but (also) a signifying machine reveals a reflexive commentary upon the changing conditions of mass media production in the beginning of the twentieth century, crossing the gramophone, telegraph, kinetograph, and rotary press. Ultimately, Roussel's critique of mechanical reproducibility operates through a modernist technique that secretly replicates the mechanisms of Edisonian production; this technique recurs thematically throughout Roussel's writing as the spectacular technics of his inventors, performed and enacted through the process of mechanically assembling, reproducing, and exhibiting impressed and impressive works of art.

Reading procedures

Rather than locating the representative fidelity of the text in what the text says, Roussel's procedural texts constantly draw attention to hidden significations that lie buried in their processes of textual composition. Shortly following the construction of Louise's experimental lab, the African Séil-kor shows his European visitors a manuscript parchment with drawings produced by the emperor. As Séil-kor explains, each sketch was produced daily by the emperor looking at the position and movement of his troops. Through the systematic sketching of his vision of the troops, the emperor documents "the different operations accomplished by his troops" ("les différentes opérations accomplies par ses troupes"; Roussel 433). Much like Louise's reproduction machine, the emperor's notetaking process converts his visual impressions of the troops into material impressions on a parchment page. At the same time, the signifying act of this text lies not in its visual impression, but rather its procedures of production. The parchment does not merely represent the emperor's visual image of the troops, but rather systematically documents the operations and movements of the troops—it serves more as a register of material operations than the reproduction of an image. The parchment is not (just) an image or a story, but rather a "strategic guide" deployed by the emperor. Here, representation exists not only at the level of vision and writing, but also procedure:

Roussel himself defines it [procedure] as "unforeseen creation due to phonic combinations," this innovation remains related to the material production perceptible from a linguistic manipulation. The irreducibly other—the emergence *ex nihilo*—is rejected outside of the work, toward the idea of procedure itself.

Roussel lui-même le définit [le procédé] comme “création imprévue due à des combinaisons phoniques”, cette nouveauté demure référée à l’engendrement matériellement repérable d’une manipulation langagière. L’irréductiblement autre—le surgissement ex nihilo—est rejeté en deçà de l’oeuvre, vers l’idée même du procédé. (Reggiani 158)

Just as the material properties of Scott’s book become embedded in the reproduction mechanism of Louise’s machine (influencing its light sensitivity), here, Talou’s art converts the physical movements of his troops into physical marks on parchment. Reading and accounting for the true meaning of Talou’s art therefore requires a procedural hermeneutic that reveals artistic impressions as material marks of lived, physical acts.

And yet Roussel does not stop here. In addition to converting the physical acts of his troops into a work of art, the emperor further converts his art into material operations for his troops to act out once more. Using his visual notes to compose spoken text, the emperor writes a poem called “la *Jéroukka*” that translates the strategic operations of his troops into strategies for composing lines of poetry. This process of material and artistic creation is based upon rules and constraints at all points. Just as the troops must march according to certain rules (acting within the constraints of their prescribed attack strategies), Talou must compose his lines according to poetic constraints of meter, etc. (constraints which directly correlate to those of his troops). In addition to composing la *Jéroukka*, Talou also makes his troops sing his verse, crafting a process of constraint-based production that converts the operations of his troops from one medium to another.

Just as Louise's machine translates photographic impressions into artistic ones, so too does Talou reproduce the operations of his troops through multiple acts of physical inscription and enactment. And yet, this chain of signifying production is masked by the status of Talou's verse as art. Decoding the hidden meaning of Talou's text does not require a purely linguistic or visual hermeneutic, but also a procedural one. This procedural hermeneutic reads the material conditions of the text through the constraints under which it was produced, understanding that which the text represents down to the material conditions used to author that representation. Through the construction of these signifying machines, Roussel outlines a process of procedural interpretation that becomes explicitly tied to the material production and reproduction of books and manuscripts. The procedural meaning of Talou's text lies in its ability to document and reproduce Talou's military control over his troops. In other words, the procedures of the text are fundamentally entwined in the ruling procedures of Talou as emperor and military commander. Reading Talou's text through this procedural hermeneutic therefore reveals its status as tool for solidifying Talou's rule. As his troops march and sing, as Talou watches, draws, and composes, the constraints imposed upon each individual inveigle them in the governmental power of Talou's regime. Talou's rule becomes expressed not only through the dutiful actions of his troops, but also through the material production of art, poetry, and sound.

The signifying process of both Talou and Louise's texts functions through acts of encoding and decoding, in which the meaning of the text being read does not lie in what the text immediately says or represents, but rather is unlocked by reading the procedural composition of the text as a decoding key to expose the phenomenal, material events

secretly embedded into the bibliographic structure of the text itself.⁴ By converting phenomenal actions into bibliographic impressions, Roussel's texts at once mask and expose their own meaning. These procedural texts function not so much as words to be read, but rather as ciphers to be decoded and decrypted; their linguistic properties must be bibliographically rearranged and reordered to expose the material information they preserve in textual form. In this context, the visual "impressions" created by narrative description function secretly as material "impressions" of physical, phenomenal actions upon paper, wood, parchment, and so on. Through the act of "impressing his subjects" ("impressionner ses sujets"), Talou not only reduces his subjects to visual impressions, but also material impressions on his manuscript page. What's more, the phenomenon of impressing or entertaining his subjects as a spectating audience further reveals a loop of production in which Talou uses art to demonstrate power over his troops. Here, spectacle and spectatorship combine through the state-sanctioned apparatuses of poetry, song, and exhibition. In participating in the public singing of Talou's *Jéroukka*, the Phoukelenein troops not only unwittingly reproduce their own military procedures in artistic form, but also solidify the governmental procedures of Talou's regime through a public speech act that celebrates Talou's military strength (the poem is the national hymn of Talou's Phoukenelein regime). Indeed, the *Jéroukka*'s status as a material (speech) action, rather than a purely visual or linguistic representation is encoded into its very name—"Jéroukka" is a near anagram for "à jouer" ("to be played").

Across both these instances of procedural reproduction, reading the text at hand not as linguistic representation but material procedure unlocks or decrypts specific material circumstances that are key to the significance of the artwork in question. In this

way, the goal of Roussel's texts is not so much to achieve narrative completion as much as it is to translate and encode specific material circumstances, and in so doing preserve them. In this way, procedural texts function as experiments in encoding and transmitting specific physical procedures, whether they be the procedures of Talou's military strength or the specific light conditions of a given view or vantage point. These textual experiments play on the double signification of the word "experience," which can refer to both a scientific experiment and a lived, personal experience. Reflexively decrypting and decoding the double sense in Roussel's deployment of the word "experience" reveals its status as a procedural cipher in Roussel's text. Indeed, Roussel strategically deploys near anagrams throughout his writing; in so doing, he conducts the compositional history of his writing to the level of story, setting, set-piece, and character (making linguistic elements of his stories procedural encryptions of his compositional experiences). The encoding of fact as fiction is even disclosed through the main character of *Locus Solus*; Duhl-Seroul is a near anagram for "lu de Roussel" ("read by Roussel"). (Amiot 11)

Decrypting Roussel's own words and writing as procedure, rather than faithful representation, reveals material traces of artistic creation. By the same token, just as procedural texts function as experiments for reproducing and preserving physical experience, decoding, and unlocking experimental texts reconstructs the artistic experiences they hide and encrypt. This holds true of the texts Roussel describes as well as Roussel's texts themselves.

Roussel decodes the double signification of the literary experiment in *Impressions d'Afrique* and *Locus Solus*, through instances of experiments that use procedural creation to access moments of artistic inspiration. Just as decoding the

material, bibliographic “codes” of books and manuscripts reveal the process of artistic creation that influenced their development, so too does Roussel suggest that procedural creation can access earlier moments of artistic experience. In one instance of this “experience,” Fuxier embeds miniaturized reproductions of artwork into maturing grapes. As the grapes mature, the growth of the grape animates the tableau, entwining its static elements with the dynamic growth of the grape; this creates “miniscule characters kept prisoner in the center of diaphanous globes...the manipulations operated upon the germ had brought about the suppression of the grape seeds, and nothing troubled the purity of the Lilliputian statues, translucent and colored, the material for which was furnished by the pulp itself” (“de minuscules personnages prisonniers au centre des globes diaphanes...les manipulations opérées sur le germe avaient amené la suppression des pépins, et rien ne troublait la pureté des lilliputiennes statues translucides et colorées, dont la matière était fournie par la pulpe elle-même”; Roussel 165). Fuxier’s literary experiment lies in procedurally animating works of art to make them motile and reconfigurable; and yet the goal of this “experience” is not simply to make paintings move, but rather to procedurally reproduce specific historical and artistic “experiences.” In one grape, Fuxier reproduces Napoleon in Spain, encapsulated in “a fourth grape, in which the emperor, clothed in his green cloth, passed by on horse as victor amongst the inhabitants who seemed to honor him by the secretly menacing attitude” (“un quatrième grain, dans lequel l’empereur, vêtu de son habit vert, passait à cheval en vainqueur au milieu d’habitants qui semblaient le honnir par leur attitude sourdement menaçante”; 166). Another grain shows an image of Jesus speaking with a disciple. The penultimate grain shows a young adolescent, which Fuxier explains as “The first amorous sensation experienced by Jean-Jacques Rousseau’s

Émile” (“La première sensation amoureuse éprouvée par L’*Émile* de Jean-Jacques Rousseau”; Roussel 168). The importance of Fuxier’s “experiences” lies in their status precisely as such: attempts to recapture specific historical and artistic circumstances by procedurally manipulating and rearranging works of art.

Instances of procedural attempts to recapture previous experiences through art run throughout Roussel’s work. Echoing Fuxier’s historical figures trapped in maturing grapes, the middle chapter of *Locus Solus* describes prisoners (re-animated dead bodies) mechanically repeating scenes of love and grief. What’s more, many of these scenes explicitly describe reproduction technologies, entwining the repetitious actions of each prisoner with a specific technology of artistic duplication. The longest of these accounts describes a man imprisoned in a large library filled with skulls, where he reads “Runic manuscript letters, facsimiles on a certain of vertical bank of paper making up...excerpts from the *Times*” (“des lettres runiques de manuscrit, fac-similées sur certain bord vertical en papier faisant partie...des morceaux du *Times*”; Roussel 137). The animated corpse (François-Charles) carries out an elaborate method for reproducing the runic letters that also serves to decipher them: he copies the text of both the *Times* fac-simile and another, unidentified volume onto two sides of a fine sheet of paper in two different colors. He then counts an unspecified number of letters between the words he has copied; “Sometimes, arriving at some determined number, he reproduced the lastly touched letter on the bottom of the slate—then he continued the operation” (“Parfois, arrivant à quelque nombre déterminé, il reproduisait sur le bas de l’ardoise la lettre touchée en dernier lieu—puis in continuait l’opération”; Roussel 138). This procedural operation produces the words “vedette en rubis” (“movie star in ruby red”). Once completing this operation,

the corpse of François-Charles becomes highly agitated, signs his name on the back of the manuscript he has produced, and shoots himself in the head. Trapped in Canterel's experimental chamber, the corpse of François-Charles repeats this procedure over-and-over again, transformed into a human machine for duplicating the mysterious encoded document whose meaning is unknown. Charles's corpse becomes an undead machine for duplicating an encrypted document, while the mechanical operations of that duplication process become a forensic key for unlocking the cryptographic code of the document itself. As both a literal exhumed corpse and an embodied procedure for textual decoding, Charles's corpse is de-crypted. (This reading can also be extended to the inscriptive surfaces of the book—paper and parchment before it—which re-animate the corpses of plant and animal life.)

And yet, like Fuxier's historical figures animated by grapes, the corpse of François-Charles enacts an artistic procedure whose experimental aim is to unearth and recapture previous lived experiences. The cryptic text of the manuscript is no more than a code for unlocking a secret confession written by Charles's father, François-Jules, before he (also) committed suicide. François-Charles died after decoding the cryptographic text left by his dead father, François-Jules, and discovering the contents of his confession. Charles's corpse is then brought to Locus Solus, where Canterel attempts to procedurally reproduce the procedure through which Charles decoded his father's confession, so that the confession can be discovered in real life and the mystery of François-Jules (the father) can be solved. Canterel decodes the hidden meaning of François-Charles's text by exposing it to a procedural hermeneutic, a hermeneutic that does not decode the text by attending only to what it reads, but furthermore by reconstructing the bibliographic

operations through that reading was produced. Through the procedural reconstruction of François-Charles's reproduction of his father's writing procedures, Canterel is able to figuratively unlock the mystery of François-Charles's suicide and literally unlock a hidden case in which Charles's father hid his confession. The manuscript produced by Jules is a combination to unlock a safe in which his father hid his secret confession, and the recreation of Charles's (re)writing process shows Canterel where to find the confession in Jules's office. The confession explains the circumstances of Jules's suicide and the motive for Charles's suicide, in turn.

While he was originally decoding the runic text of the *Times*, François-Jules's young daughter cut up the paper used for his work and used it to produce a papier-mâché skull. Subsequently, she burned the papers, causing a fire in which she accidentally died. Following this tragedy, Jules adopted a young girl Andrée, and raised her with his biological son François-Charles. As they grew older, Charles and Andrée began to fall in love with each other, while Jules became jealous of his son and began to desire Andrée for himself. When she confronted Jules, telling him of her feelings for Charles, Jules strangled her; an acquaintance, Thierry, was then accused of the crime (while Jules remained unsuspected). Overcome by grief, François-Jules composed a written confession, encoding it using an elaborate writing procedure enacted with textual documents related to his personal history and killed himself. Jules found the history of an old, powerful family written in one of his books, translating the description of the family's lineage into a cryptographic procedure: he intermingled key elements of the family's story with letters of the original runic text (which he abandoned after the fire) in order to produce the words "vedette en rubis." Furthermore, Jules created a resemblance

between the forehead of the skull and the runic letters to make his form of encrypting more visible. Finally, Jules locked his confession in a box ornamented with rubies (in order to celebrate the largest achievements of his life), which needed to be manipulated in a specific fashion in order to unlock the box. Following his father's suicide, François-Charles notices the change in his father's office and discovers the clues left within his father's writing and reading materials. Charles decodes his father's cipher by recreating his writing process in order to produce the "vedette en rubis" document, using it as a cryptographic key to open his father's safe by manipulating the rubies. Charles then discovers his father's confession and kills himself.

While the description of François-Jules's death appears as the hidden meaning unlocked by Canterel's procedural hermeneutic, it instead serves as a placeholder for yet another cipher that upends any expectation that narrative description can unlock the complete mystery of François-Jules's writing. The cryptic figure of Jules's text is no more than a cipher for the text of the encoded *Times* manuscript, which was discovered in the wreckage of a famous adventurer who died under mysterious circumstances. Just as the mystery of François-Charles's text promises the key to decode the circumstances of François-Jules's death, so too does François-Jules's text promise to decode the circumstances of the adventurer's death. And yet Roussel describes the narrative uncovered by Canterel's procedural hermeneutic without ever revealing the cryptographic procedure through which it was uncovered—the entire description of Charles's decoding process explains what he writes—"vedette en rubis"—without ever revealing the procedure for manipulating the rubies that is central to unlocking the Jules's safe. Roussel creates a narratological bait-and-switch, in which the search for narrative

meaning generates still new unsolved narrative questions. Interpreting Roussel's Russian-doll-like narrative ciphers requires subjecting them to the same modes of decrypting that they describe, and instead examining the material modes of production through which the encoded texts are produced (just as Canterel and François-Charles). The significance of François-Charles's story does not lie in a hidden meaning (or descriptive resolution), but instead its enmeshment in the material circumstances of the story's physical production. Canterel decodes Charles's text by examining the bibliographic procedures through which Charles produced the text, the same hermeneutic undertaken by Charles in his father's study (as well as by Charles's father, in that same study, with the runic text in the *Times*). François-Jules's story materially incorporates documentary traces of a mysterious death and a family lineage into the document explaining his own death, yet the link between these materials lies in their ability to transmit and reproduce material traces of earlier historical events (making the resonance simultaneously textual and procedural).

The procedural texts described by Roussel reflexively comment upon their own fictitious circumstances of production, exposing a hermeneutic that decodes the hidden meaning of the text by probing how and where its material modes of production are enmeshed in specific historical circumstances. These encoded texts serve as decoding mechanisms for reading Roussel's own novels, which string together interconnected descriptions of mechanical texts without much narrative connecting them (a form anchored in their serial publication in the *Gaulois du Dimanche*). Decoding *Locus Solus* and *Impressions d'Afrique* therefore requires subjecting them to the procedural hermeneutic described by Roussel in the texts themselves, examining the material circumstances of production and reproduction that shape Roussel's fictitious duplication

machines. Just as the procedural art of François-Charles, Fuxier, Louise, and others reveal material constraints that inform the production of earlier works of art, so too are these artists' own production processes enmeshed in specific material constraints described by Roussel.⁵ Fuxier's Lilliputians are trapped in his ripening grapes, while Duhl-Seroul's (lu de Roussel) corpses are trapped in their display cases, their personal experiences made reproducible for an audience of spectators. The procedural reading applied within (and upon) Roussel's fictitious artwork can be applied to Roussel's own fiction. Just as the hidden procedural history of Canterel's corpses becomes unveiled through their actions, so too do the procedural constraints imposed on Roussel's own characters shape the production of their duplication processes.

Halfway through *Impressions d'Afrique*, Roussel reveals that the experiments undertaken by his characters are, in fact, subject to the procedural control executed by the emperor Talou-Yaour. Upon the successful testing of Louise's image reproduction machine, which successfully duplicates the image of a road into a color photograph inscribed by the machine, "Sirdah testified the emperor's complete satisfaction to Louise, enthralled by the perfect way in which the young woman had filled all the conditions strictly imposed by him" ("Sirdah témoignait à Louise l'entière satisfaction de l'empereur, émerveillé de la façon parfaite dont la jeune femme avait rempli toutes les conditions strictement imposées par lui"; Roussel 209). At this point in the novel, Roussel deploys the same narrative tactic of procedural reading at the level of his own fiction, revealing that the characters of *Impressions d'Afrique* are European travelers shipwrecked in Talou's domain who are being held captive in order to produce their experiments for Talou's amusement. Just as Roussel's characters experiment with

different modes of material impression to produce duplication machines, so too does Talou use those machines to impress his subjects, tying the mechanical reproducibility of art to the procedures of Talou's governmental power. Here, spectacle and spectatorship become acts through which the people on display are both imprisoned and extorted, forced to duplicate artwork according to specific mechanical procedures. Just as the procedures of Roussel's artwork extend back into the past, revealing material impressions of Napoleon in Spain, a mysterious shipwreck, and so on, so too do they extend into current material circumstances, enmeshed in the governmental constraints of Talou and Dhul-Seroul's territories. Both Talou and Dhul-Seroul's audiences watch the magical experiments in awe, "impressionés" by the spectacle put on for them. At the end of *Impressions d'Afrique*, Roussel's characters are set free after Carmichaël successfully sings a Phoukelenian hymn, *La Bataille du Tez*, replicating the rhythm, cadence, etc. of the poem to Talou's satisfaction. Carmichaël is forced to sing the song for Talou's subjects, reproducing the sound and meter of the song without understanding any of its foreign linguistic content: "[He] began to proudly sing his incomprehensible piece, which he articulated this time right to the end without the smallest error. Dazzled by this perfect execution, Talou retook the path to the imperial square..." ("[il] se mit à chanter crânement son incompréhensible morceau, qu'il articula cette fois jusqu'au bout sans la plus minime erreur. Ébloui par cette exécution parfaite, Talou reprit le chemin de la case impériale..."; Roussel 453-454). The language of compiling is deployed in the cases of both Louise (who follows "the conditions strictly imposed by [Talou]") as well as Carmichaël (who perfectly "executes" the song without any "errors"). (In the instance of Carmichaël, the word "execute" functions as another of Roussel's instances of wordplay,

since Carmichaël's perfect execution of the vocal operations needed to sing the song is carried out under the potential threat of death.) The ability of both characters to accurately reproduce the material content of sound and sight to Talou's satisfaction produces visual and audible spectacles that convert material traces of previous artistic experience into mass spectacles put on display for audiences of spectators. Rather than producing linguistic description that resolves into coherent narrative stories, Roussel's texts instead detail networks of textual, audible, and visual reproduction in which the mechanics of technological reproducibility are enmeshed in the specific material circumstances under which they are produced and reproduced (or duplicated). At this point, Roussel's texts stand in metonymic relationship to the procedural artwork they describe—detailing artistic procedures whose significance remains encrypted not in narrative form, but rather in procedural replication. Decoding Roussel's texts therefore requires subjecting them to a procedural hermeneutic that reads Roussel's textual procedures in concert with those that influenced the text's own production and dissemination.

Roussel's fictitious duplication procedures duplicate the mechanics of seeing, viewing, and writing technologies of his day, specifically the spectacular inventions of Thomas Edison. Indeed, Edison described the phonograph as a machine he could use to communicate with the dead, mentioning in his diary his attempt to communicate with the ghost of Napoleon.⁶ Douglas Kahn explains:

After all, Edison developed his philosophy and his status as an expert on the afterlife only after his body had techno-melded with the mediational properties of the phonograph, becoming a quasi-body which could better

commune with ghosts—his game’s halo effect actually began with the invention of the phonograph, after which he was named the Wizard of Menlo Park. People expected to hear dead voices played back through his half-man, half-phonograph, this machine that could die, a man that contained voices of the past...Consequently, the phonograph also prefigured Edison's design for a device to communicate with the dead...

(76-77)

Fuxier’s recreation of Napoleon in Spain alludes to Edison, as do Canterel’s animated corpses who are literally used to communicate with the dead (François-Jules).⁷ Martial Canterel’s role as the proprietor of Locus Solus, his fantastic estate filled with miraculous inventions, stands-in for Edison’s cultural status of the Wizard of Menlo Park, of which he offered guided tours (Roussel casts himself in the fictionalized role of Edison, Canterel). Douglas Kahn unpacks the connections between Roussel/Edison and Locus Solus/Menlo Park. He explains:

The figure of Edison paralleled and made incursions into *Locus Solus* in many ways. The novel, which takes its name from the estate of the brilliant and wealthy inventor Martial Canterel, consists entirely of a tour of the fantastic relics and inventions found upon the site and is thus modeled on Menlo Park and its proprietor. In Janet's essay, Roussel uses the petty fictions of the pseudonym "Martial" and consequently identifies with Edison, perhaps under the auspices of his literary inventions. Canterel and Edison were well known for the tours of their estates, and Roussel for his touring, and they all commanded seemingly unlimited wealth and inventiveness. (78-79)

As is often the case for Roussel's texts, the correspondence between Roussel and Edison is more than merely fictional; Roussel composed most of the novel at his estate in Neuilly, the physical location in which *Locus Solus* was authored (that recurs fictionally at the setting of the novel). Echoing Kahn, John Ashbery unpacks the symbolic role played by estates in the work of Roussel:

Here [in Neuilly] he worked constantly behind the closed shutters of his villa, which was set among several acres of beautifully kept lawns and flower beds, like the villa Locus Solus in his novel of that name, the property of a Jules Verne inventor-hero names Martial Canterel who is of course Roussel himself. (xi)

Roussel's invocation of Edison operates as more than simple allusion or reference; instead the specific material operations of Edison's machines function as procedural intertexts for those of Roussel. Just as François-Jules embeds the runic operations of the dead explorer into his own writing process in order to reflexively comment upon his suicide, so too do Roussel's procedural texts incorporate the operations of Edison's inventions in order to comment upon the production, reproduction, and dissemination of Roussel's own writing.

Machine writing Edison

Cryptography, encoding, and duplication serve as both the thematic and procedural keys to decoding Roussel's mechanical texts. Procedurally reading Roussel's examples of mechanized reproduction reveals their own status as procedural reproductions of the mechanics and economics of Edison's reproduction techniques. In

this way, Roussel's spectacular descriptions are both figuratively and literally unspooled as Edisonian spectacles, propelled through the physical drives of rotative mechanisms and the industrial drive for wealth and fame. These mechanisms are both described thematically in Roussel's novels and enacted materially through the specific compositional techniques Roussel deployed to author those thematic representations. Subjecting Roussel's texts to a procedural hermeneutic (with the rotative procedures of Edison's duplication machines as that hermeneutic's textual application) unspools the texts' own commentary upon the procedures of artistic reproduction at their historical moment, their enmeshment in those procedures for mechanical reproducibility, and a critique of the relationship between spectacle, electricity, and commerce in relation to print media just prior to World War I.

Echoing Edison's spectral experiments with the phonograph, *Locus Solus* describes a father who attempts to manipulate the phonographic impressions of his audience in order to reproduce the voice of his dead daughter.⁸ Lucius asks one of Canterel's audience members—Malvina—to sing for him. Malvina sings the phrase “O Rebecca.” Lucius “made him repeat the same fragment for a long time, attuning his ear above all else to the very pure vibrations of the last note” (“lui fit longtemps répéter le même fragment, prenant surtout l'oreille aux vibrations très pures de la dernière note”; Roussel 228). Lucius then etches the vibrations manually into a green tablet made out of wax, directly mentioned as a quasi-phonograph; upon completing of Lucius's work, “The green tablet presented a short and thin straight ray, formed by the miniscule scratches recalling those of a phonograph roller impressed by a voice” (“la tablette verte présentait une courte et mince raie droite, formée de piqures minuscules rappelant celles des

rouleaux de phonographe impressionnées par une voix”; Roussel 229). Following the production of his phonograph record, Lucius holds the green tablet in front of a bulb that emits intermittent bursts of light, casting red light onto the ground as it shines through the grooves etched into the wax. The depth of the groove corresponds to different intensities in tint of red (depending on how much light is filtered through the wax); this enables Lucius to visually verify the precision of his work and make fine adjustments, “perfecting the future quality of the germinating tones” (“perfectionnant la qualité future de sonorités en germe”; Roussel 231). Upon the final completion of his work, Lucius plays back his tablet on a crypto-phonograph, the needle of which “swinging on this rough path, transmitted numerous vibrations to the membrane and, escaping from the horn, the voice of a woman; the same of that of Malvina; clearly sung the notes in question: ‘O Rébecca...’” (“remuant sur ce chemin rugueux, transmit maintes vibrations à la membrane, et, s’échappant du cornet, une voix de femme; pareille à celle de Malvina; chanta clairement sur les notes demandées: ‘*O Rébecca...*’ ”; Roussel 231). By editing the physical impressions of Malvina’s voice made upon the green wax tablet, Lucius is able to produce inscriptive edits that correspond to auditory changes in the pitch of Malvina’s voice, reproducing the pitch and timbre of his dead daughter. Lucius’s technique of inscriptive editing parallel’s Charles Tainter’s innovation in the phonograph by switching the medium from tin foil to wax: “While the tinfoil’s needle displaced the recording medium, Tainter’s idea was to cut or engrave an impression upon it. This produced a more durable recording with clearer reproduction.” (Millard 64) Roussel exaggerates the mechanics of Edison’s spectral endeavor, creating fantastic and spectacular procedures for phonographic production and editing that embellish the

innovation of Tainter. He further fictionalizes Edison's attempts to communicate with the dead through the spectacular experiments of Bex, François-Charles, and Lucius—all of whom use the mechanical reproducibility of art to access the lived experiences of historical figures.

Roussel's hyperbolic reproductions of Edison's procedures for mechanical reproducibility comment upon the relationship between spectacle, profit, and punishment in media at the turn of the twentieth century. Yet another fictionalized account of sound reproduction follows Bex's experiment with the grapes; here, Talou's oldest son, Folgar, reproduces the sound of tortured cats. Folgar attaches three cats to a partially biotic spinning cylinder, which rotates as the cats are impaled by black needles (reminiscent of phonography needles). As the rotating disc begins to turn even faster, Roussel's description of the machine recalls his evocation of the phonograph when describing Lucius's work: "The speed of progression intensified once more under the influence of the hundred scratches still more deep and more torturous; the air, violently displaced, produced a continuous whirring that the tuning fork continually took up; the cats, confused, formed an uninterrupted disc striped with green, from which escaped wild moans" ("La vitesse d'évolution s'accentua encore sous l'influence des cent piqûres toujours plus profondes et plus torturantes; l'air, violemment déplacé, produisait un bruissement continu don't le diapason montait sans cesse; les chats, confondus, formaient un disque ininterrompu et rayé de vert, d'où s'échappaient des plaintes farouches"; Roussel 187). As the cats spin faster, they form a rotating green disc that appears to be emitting sound (the sound of the cats crying in pain). Following the completion of this experiment, Folgar uses his living machine to produce an imitation of the sound of

thunder, followed by “the remote voice of dying and prolonged echoes” (“la voix lointaine des échos mourants et prolongés”; Roussel 191). Roussel’s fantastical and unsettling description of the abuse of cats to reproduce sound mechanically echoes historical experiments dissecting cats in experiments with early sound. Cat dissection, in particular, played a key role in the development of psychoacoustics. Jonathan Sterne explains the 1929 experiment of two Princeton researchers, Ernest Wever and Charles Bray, which picked up on Edison’s experiments with animal tissue and sound earlier in the century: “[they] removed part of a cat’s skull and most of its brain in order to attach an electrode. . . to the animal’s right auditory nerve. . . electrodes were then hooked up to a vacuum tube amplifier,” and “signals were sent to a telephone receiver.” (Sterne 61) In these earlier experiments, Edison used animal membrane as an inscriptive medium, dissecting animals (often cats) and incorporating their bodies into his reproduction processes:

[the] phonoautograph, which used a rod attached to a membrane diaphragm to trace out the undulations of sound waves...The research on the telephone familiarized Edison with the thin discs of metal or animal membrane that acted like a diaphragm by vibrating to produce sound waves. By attaching a needle to a diaphragm and running a strip of paper underneath it, Edison was able to indent the sound waves of his shouts on the paraffin covered paper (Millard 163)

Indeed, Roussel’s description of the torturous duplication machine blends the properties of machine and animal, particularly employing the image of nerves and membranes: “The very substance of the candle resembled the porous and appetizing pulp of some

delicately-veined fruit” (“la substance même de la chandelle ressemblait à la pulpe poreuse et appétissante de quelque fruit aux délicates nervures”; Roussel 190). Roussel’s hyperbolic accounts of Edison’s animal experiments render spectacular and strange the physical enmeshment of animal and machine through the means and materials of electrified duplication.⁹ Furthermore, the spectacle of Roussel’s descriptions, which impress his fictitious audiences (in addition to Roussel’s own implied readers), echoes the spectacle of Edison’s own experimental spectacles. In addition to the inventions mentioned here, Roussel also fictionalizes Edison’s applications of current directly to the human body. One of Canterel’s corpses is subjected to a Rousselianian interpretation of the x-ray, described as a blue light that penetrates the man’s head and kills him. In *Impressions d’Afrique*, Talou orders the invention of an electric chair to execute his wife’s secret lover; this echoes Edison’s historical invention of the electric chair and its use for corporal punishment. The combination of power, procedure, and death forms fictionalized renditions of Edison’s historical role in the governmental application of electric power to living bodies. Famously, Edison electrocuted an elephant with direct current (DC) electricity in order to impress upon the public the dangers of Nikola Tesla’s rivaling alternating current (AC).¹⁰

Roussel’s procedural vignettes not only function as textual spectacles, making Roussel’s own texts more entertaining, but also echo Edison’s deployments of reproduction technologies and electricity to amass both profit and audiences. In addition to replicating the procedures of the phonograph and phonoautograph, Roussel also incorporates the mechanics of film reproduction into his text. Key to Roussel’s textual reproduction of Edison’s manufacturing procedures is its own enmeshment in writing (all

three share the suffix *graphy*, making Roussel's wordplay a procedural inversion of Friedrich Kittler's argument that Edisonian inscription forever divorced sound and image from the physical word¹¹); by describing mechanical vision and hearing at the level of material impression upon inscriptive media, Roussel situates image and audio reproduction in concert with the reproduction of print text (all three of which function through the mechanics of physical inscription). Further echoing the Rousselian inversion of Kittler's premise, Douglas Kahn argues:

Phonography represents, as its needles scratches out its jagged line, an amalgam of writing and speech, joining writing through graphic inscription and speech through audibility. It thus carries a fuller complement of language and can better embrace the range of machinations in Rousselian wordplay than can the operations of language alone. The mechanics involved can fuse, in an economy of parts of movement, procedures of repetition and imitation with his technophilia and penchants for the popular arts, such as ventriloquy and vocal animation. (70)

Roussel explicitly links the mechanical reproduction of books, sound, and images by constructing them as writing problems, inscriptive problems. In so doing, Roussel offers a procedural take on the modernist technical preoccupation with vision and hearing as issues of textual representation; whereas techniques such as Proust's literary impressionism attempt to textually reproduce artistic visual practice, Roussel works to reproduce the procedures of film editing and viewing in *Impressions d'Afrique* (at both the thematic level and through the material construction of the text itself). Roussel thematically ties together the materiality of textual and filmic inscription through the

construction of Louise's lab, whose use of *The Fair Maid of Perth* replicates Edison's first projection studio, the *Black Maria*. Andre Millard explains Edison's construction of the Black Maria, specifically designed to accommodate increasing audience demand for film (requiring a larger scale deployment of the peep-hole machine used as the first mechanism for exposing moving images to mass audiences). Following this design principle, Edison's 1891 patents for the kinetoscope and the kinetograph, and "the camera...came complete in a lightproof box with an eye piece for the operator." (143) In addition to filtering light, Edison's design also relied on the mechanics of circular rotation to reproduce sight at an industrial scale:

Edison naturally hoped to achieve visual reproduction in the same mechanical form as he reproduced sound, using the phonograph analogy in his first experimental apparatus. The revolving cylinder—a recurring motif in Edison's inventions—was chosen as the format of the experimental model. Consequently the first experiments at West Orange consisted of laying very small photographs on a cylinder, slightly larger than the tinfoil phonograph but of the same general arrangement, and viewing them through a microscope. Both light and sound need amplification as they emerged from the turning cylinder. Dickson described the first apparatus as having the sound and picture cylinders running on the same axis and powered by the same electric motor. The motor came from the phonograph... (Millard 139)

The design for the Black Maria extended this basic design principle to the scale of a building, just as the roof of Louise's lab uses the pages of Scott's novel to filter the light

through one specific point in the roof.¹² The construction of Louise's lab is nearly identical to that of Edison's studio:

The building was about forty-feet long and ten-feet wide. Made of wood and covered with black tar paper, it moved on a circular track to follow the movement of the sun. Artificial light was used in this studio and part of its roof could be opened to let in natural light. (149)

What's more, just as Louise's lab is used to engineer an image duplication process for the amusement of Talou and his subjects, so too was the Black Maria specifically designed to mass produce film to meet public demand for new and longer films that surpassed the spectacle of those viewable in moving picture parlors of the day. (149) Both Louise's lab and the Black Maria are laboratories for inscriptive experiments in the industrial production of visual spectacle.

In addition to recreating the mechanics of film projection at the descriptive and procedural levels, Roussel also transmutes specific scenes from the films of Georges Méliès into his own textual descriptions. As Kenji Kitayama explains, numerous scenes in *Impressions d'Afrique* pay direct homage to those of Méliès; for instance, a scene in which Talou enters an esplanade followed by a cortege of 36 women parodies the last scene of Méliès's *Cendrillon*, where a cortege of 36 figurines perform a ballet. What's more, the dramatic construction of Canterel's *tableaux vivants* mimics the filmic technique of Méliès's movies in the form of *tableaux vivants* (for instance his *Affair Dreyfus*). As Kitayama argues, Roussel's technique of masking procedure with description is informed by his early experiences in cinema houses. He writes:

Roussel's frequenting of [movie] halls can be confirmed by the 'texts of great youth' and *Impressions of Africa*, and Michel Leris gives evidence of this as well. Without doubt he went to the cinema not only to see projected films, but still other spectacles. He could be greatly influenced by the conditions that were therefore those of the cinema. If this is the case, does one not find oneself persuaded of the necessity of double writing, which consists of telling without providing the story.

La fréquentation des salles par Roussel peut être confirmée par les 'textes de grande jeunesse' et *Impressions d'Afrique*, et Michel Leris en témoigne aussi. Sans doute allait-il au cinéma pour voir non seulement des films projetés, mais encore d'autres spectacles. Il pouvait être grandement influencé par les conditions qui étaient alors celles du cinéma. S'il en est ainsi, ne se trouve-t-on pas persuadé de la nécessité de l'écriture double, qui consiste à raconter sans donner d'histoire. (203)

Kitayama's concept of "l'écriture double" echoes my own concept of procedural writing, through which Roussel constructs many of his *récits*, and particularly the *tableaux vivants* (with the nested stories of François-Charles, François-Jules, and the explorer as its touchstone).

At the same time, Roussel's textual reconstruction of the mechanics of film production is more than purely thematic; indeed, his own compositional process experimentally reproduces the procedures for mechanical inscription described in the text. The phonograph, the telegraph, the kinetograph, and the manuscript are materially

linked through the process of physical inscription; Millard explains: “In 1877 [Edison] patented an automatic telegraph that recorded the data and slashes by embossing them on revolving discs of paper...Edison discovered that the indentation of dots and dashes recreated a sound that bore some resemblance to the human voice.” (63) Edison’s experiments with the phonograph and telegraph revealed that changes in paper inscription (dots and dashes) produced changes in sound. The mechanical connection between moving images and sound also occurs at the level of the rotary mechanism used to facilitate the inscriptive process (a procedure that recurs with the introduction of the rotary press to French printing houses): “...the mechanics of moving a filmstrip through a camera was much the same as the movement of perforated tape through an automatic telegraph.” (Millard 141-142) Roussel’s procedure for writing his *récits* (including those referencing Méliès) also functioned by producing material changes in his written words that effected changes in both the auditory and linguistic signification of his writing. Roussel explains this crypto-phonographic technique in *Comment j’ai écrit certains de mes livres* (How I wrote certain of my books), writing: “I chose almost identical words (reminiscent of metagrams). For example, *billard* [billiard table] and *pillard* [plundered]. To these I added similar words capable of two different meanings, thus obtaining almost two identical phrases.” (3) Just as the shift from a dash to a dot produces a different sound (and corollary shift in lexical signification), so too does the inscriptive shift of the semicircle (moving the lower semicircle of the “b” up to form a “p,” or perhaps simply flipping the letter along its y axis) produce a vocal shift from “billard” to “pillard” and a corollary shift in linguistic signification. Roussel’s typography materially links sound and writing technologies:

...whenever sound occurs in Roussel's works, it is never far from visuality. A visual form is contained within some instances of the method; a slight variation in sound is often paralleled by an equally slight graphic variation, and they work in tandem to explode into divergent meanings. The example most commonly referred to is a delicate plosive difference generated by the shift of the stem of a *b* down to form a *p*. The descent of the stem of the *b*—the pen comes down upon the paper and the stylus drops down upon its surface—relates aurality to visuality within the phonemics of writing and the inscriptive basis of phonography, which itself was preceded by the nineteenth-century developments of visible sound and visible speech and provoked speculations about the possibilities of a fully technologized alphabet of all sounds. (Kahn 73)

Just as an inscriptive shift in the paper or wax medium of a telegraph or gramophone produces different sounds (different words, messages), so too do inscriptive shifts in Roussel's own writing materials produce variant descriptive outcomes. Roussel explains:

In the case of *billard* and *pillard* the two phrases I obtained were:

1. *Les lettres du blanc sur les bandes du vieux billard*...[The white letters on the cushions of the old billiard table...]
2. *Les lettres du blanc sur les bandes du vieux pillard*...[The white man's letters on the hordes of the old plunderer...]

In the first, “lettres” was taken in the sense of lettering, “blanc” in the sense of a cube of chalk, and “bandes” as in cushions.

In the second, “lettres” was taken in the sense of missibles, “blanc” as in white man, and “bandes” as in hordes.

The two phrases found, it was a case of writing a story which could begin with the first and end with the latter.

Now it was from the resolution of this problem that I derived all my materials....At the beginning we see someone chalking letters on the cushions of an old billiard table. These letters, in the form of a cryptogram, composed the final sentence...and the story as a whole turned on the tale of a rebus based on the explorer’s epistolary narratives. (4)

Through this poetic method, Roussel engineered a procedural technique for composition and revision, incorporating the cryptographic mechanisms of hearing machines into his material manuscripts. Echoing the filmic techniques of Méliès, Roussel’s writing procedure provided the basis for spectacular and strange descriptive vignettes, *impressionnant* set-pieces that transform Roussel’s attempt to write sound and image into metatextual spectacles of mass media production. Roussel’s *tableaux* thematically mask the procedures of their inscriptive medium behind hyperbolic sets, images, and description, in a literary application of Méliès’s visual effects. Méliès’s films were among the first to use visual effects, constructing elaborate mechanical apparatuses such as trap doors, costumes, and so on in order to produce fantastical images onscreen. The impressive visual effect of Méliès’s work relied precisely upon the invisibility of its mechanical construction, leaving viewers wondering how the feats they saw onscreen could have been achieved. Roussel deploys this technique at the literary level, authoring surreal set pieces whose bibliographic bulwark and mechanisms disappear beneath the

spectacular nature of the tale itself. In this way, the creation of fantastical spectacles based on the technique of graphically manipulating letters and phonemes stands as a literary implementation of visual effects.

Roussel's inscriptive shift from "b" to "p" provided the narrative basis for *Impressions d'Afrique*, making the title both a figurative comment on visual spectacle and a literal reference to Roussel's own material impressions that generated the story.¹³

Roussel explains how his poetic method generated the basis of the novel:

As for the origins of *Impressions d'Afrique*, it consisted of reconciling the words *billard* and *pillard*. The "pillard" was Talou; the "bandes" his warlike hordes the "blank" Carmichael (the word *lettres* was dropped).

I searched for a word to accompany *bandes* and through of the *reprises* (darns) in old *bandes* (billiard cushions). And the word *reprises*, in its musical sense, gave me the *Jéroukka*, that epic sung by Talou's *bandes* (warlike hordes) whose music consisted of the continual *reprises* [repetitions] of a brief melody. (5)

Just as Roussel's fictional works of art (including the *Jéroukka*) can be wound back to specific artistic procedures through which they were produced, so too can the very text of that fictional description be traced back to Roussel's own procedural techniques. Just as Edison's spectacles were unspooled through the powered apparatuses of early film projection, so too were Roussel's spectacular texts impressed through the rotating mechanisms of serial publication in France. More than literary allusion or reference, then,

Roussel's self-construction as an Edisonian writer is anchored in the material mechanisms of his text's reproduction and transmission.

Roussel's mass mechanized text

Just as the spectacular duplication techniques of Louise, Bex, Canterel and others serve to record and transmit material traces of previous artistic experience, so too do Roussel's own textual accounts of these vignettes attempt to recapture and transduce specific historical experiences and documents that serve as base material for his procedural writing method. Roussel's layered attempt to record, encrypt, and transmit experiences through the mechanics of textual duplication are brought to light and exposed through the set-piece of Louise's lab. At the metafictional level, the lab replicates the historical duplication techniques and procedures of Edison's projection studio; at the procedural level, the textual description of the lab is produced through Roussel's own technique for textual replication. Jean Ferry argues that Roussel's use of *The Fair Maid of Perth* (which thematically introduces the topic of representative fidelity) derives from his writing method (which procedurally introduces a representation that deliberately transforms and deforms its source material): "Ferry discovered, amongst [other *jeux de mots*]: 1st. Tuile (unlucky event) à perte (loss); end. Tuile (roof tile) à Perth (the city of Perth); whence the roof of the ill-starred Louise Montalescot's laboratory tiled with pages from an old and valuable copy of *the Fair Maid of Perth*." (30)¹⁴ Louise's lab as both a linguistic and a bibliographic construct physically reproduces the mechanical procedures of Edison. And yet the procedural reading of Roussel's set-piece does not stop even there. For just as Roussel's fictitious artistic procedures seek to recapture earlier artistic

experience, so too do these vignettes (as procedural textual constructs) encode and transmit sets of artistic documents that Roussel used as artistic inspiration. In the instance of Louise's lab, the description textually transduces Roussel's own lived experience writing his first novel, *La Doublure*. Roussel's autobiographical account of his writing process describes the lighting conditions of the room in which he wrote as another version of Edison's Black Maria. He writes:

Everything I wrote was surrounded in rays of light; I would close the curtains for fear the shining rays that were emanating from my pen would escape through the smallest chink; I wanted to throw back the screen and suddenly light up the world. O leave these papers lying about would have sent out rays of light as far as China... (qtd. In Kahn 171)

Je sentais la gloire... Cette gloire était un fait, une constatation, une sensation; j'avais la gloire... Ce que j'écrivais était entouré de rayonnements, je fermais les rideaux, car j'avais peur de la moindre fissure qui eut laissé passer au dehors les rayons lumineux qui sortaient de ma plume, je voulais retirer l'écran tout d'un coup et illuminer le monde. Laisser trainer ces papiers, cela aurait fait des rayons de lumière qui auraient été jusqu'au la Chine... (Roussel 129)

Roussel's autobiographical account of his moment of artistic inspiration describes rays of light coming from his pen, which he needed to keep in the room by adjusting the curtains; Roussel's fictional account of this moment reverses the description, using the pages of Scott's novel to make sure specific rays of light enter into the room (duplicating the

mechanisms of Edison). Like the undead François-Charles, who reproduces his father's writing procedure and in so doing recaptures his father's moment of despair and subsequent suicide, Roussel's metafictional account of entwining light and manuscript to produce an artistic duplication mechanism duplicates his own moment of artistic production. Still further, the main set-piece of *Locus Solus*, Canterel's twelve animated corpses, transduces not only Edison's desire to communicate with the dead but Roussel's biographic experience with death while living at his Menlo Park-esque estate in Neuilly: "This passage, one of the most unforgettable in Roussel's work and one of many which are haunted by the idea of death, was written around the time his mother died, after a long series of family deaths." (Ashbery xviii) Across *Locus Solus* and *Impressions d'Afrique*, the procedures of Bex, Canterel, Fuxier, and so on stand in for Roussel's historical attempt to inscribe, encode, and transmit his own artistic experiences into fictional description.

Roussel's metafictional reproduction of his own compositional methods (through which the linguistic, descriptive content of his novels serve as bibliographic ciphers that encrypt Roussel's lived artistic experiences) serves as the final cryptographic key for unlocking Roussel's fiction. The writing procedures of *Impressions d'Afrique* and *Locus Solus* bibliographically transduce the mechanics of sound and image reproduction into mechanics of textual reproduction. Roussel's poetic method was driven by finding artistic documents and using them as material for an inscriptive procedure:

I used anything at hand. For instance, there was a well-known advertisement for some apparatus called 'Phonotypia'; this supplied with with 'fausse note tibia'[wrong note tibia], hence the Breton Lelgoualch

(page) 66. I even utilized the name and address of my shoemaker: “Hellstern, 5, place Vendome,” [which] gave me “Hélice tourney zinc plat se rend (deviant) dome” [Propellers turns zinc flat goes (becomes) dome] (see pages 127-8)...I once came across a very amusing series of drawings... (13-14)

Roussel’s textual descriptions serve as encoded bibliographic transmissions of deformed historical documents.¹⁵ Through the application of his systematic method for graphic manipulation, as it unfolded through the physical scrapbooking procedures in Roussel’s bedroom, Roussel conceives of this procedure as an exercise in mechanized transmission. In this conception, Roussel’s novels textually reproduce the workings of film at both the linguistic and bibliographic levels—they are pieces of art produced by transforming material traces of physical matter into encoded impressions upon paper that can be rearranged, transformed, and reproduced to generate fantastical and entertaining images, sounds, and description. Roussel’s Edisonian enterprise surpasses the fictitious description of Roussel as a crypto-Edison, as Roussel’s writing process resembles an Edisonian transformation of textual production and transmission. In this sense, Roussel’s novels construct themselves as quite literal Edisonian innovations in the mechanical production of literature.

To the extent that they serve to reproduce the mechanics of film and sound technologies, Roussel’s wordplay technique serves as a procedural transduction of the techniques of mass media production. The numerous puns that run throughout *Impressions d’Afrique* not only serve as cryptogrammatic traces of Roussel’s own compositional process, but further expose the link between encoding and spectacle in the

mass production of fiction. Nowhere is this more evident than in the title of *Impressions d'Afrique* itself, which plays not only upon the word “impressions” but also the polyvalent sound of “Afrique.” Roussel explains one particular instance of material/vocal transformation deployed throughout the novel:

Abandoning at that point the scope of *billard*, I continued along the same lines. I chose a word and then linked it to another by the preposition *a* [with]; and these two words, each capable of more than one meaning, supplied me with a further creation. (Incidentally, I used this preposition *à* in the above-mentioned groups of words: *queue à chiffre, bandes à reprises, blanc à colle*.) I should point out that the initial stages of this work were difficult and already required a great deal of time. (6)

Among the phrases Roussel includes in his examples of words linked with the preposition *a* (with), there is one glaring omission: the title of *Impressions d'Afrique* itself. Decoding the title of Roussel's novel using the cryptogrammatic procedure *a* reveals two homophonic titles for the novel: *Impressions d'Afrique* (Impressions of Africa) and *Impressions à Fric* (impressions for making money).

The double signification of Roussel's title is echoed throughout the experiments in mechanical impression (inscription) described throughout the novel, which are both used to produce spectacles for Talou's audiences, and also are described as able to generate profit (in other words, Roussel's *impressions d'Afrique*—his visual impressions of Africa—function simultaneously as *impressions à fric*, material impressions used to generate attention and wealth). As we shall see, Roussel's own fictional spectacles also operate at the material and procedural levels (transforming and transducing specific

mechanisms for mass media spectacle that shaped the writing, printing, and distribution of Roussel's novels). In a metatextual fulfillment of his own mechanized writing process, Roussel describes how Louise's experimental *Impressions d'Afrique* become transformed into mass market *impressions d'Afrique*, garnering Louise a small fortune based on her success in converting her impressions of Africa into reproducible impressions of text and image that can be sold to her impressed and dazzled audience.

So, in reading in the diverse tales of explorers numerous enchanting descriptions of the tropical flora, the young girl dreamed of traversing the blazing regions of the African center, certain of increasing a hundredfold, among a vegetation without equal, her slim chances of success.

To distract herself from her singular idea, Louise worked each day on a small tract on botany, attractive and full of imagery, a work of popularization destined to emphasize the astonishing marvels of the vegetal world. She quickly terminated this opusculé, which drew a great number of copies, bringing her a small fortune.

Or, en lisant dans divers récits d'explorateurs maintes féériques descriptions de la flore tropicale, la jeune fille rêvait de parcourir les brûlantes régions du centre africain, certaine de centupler, au milieu d'une végétation sans pareille, ses maigres chances de réussite.

Pour se distraire de son idée fixe, Louise travaillait chaque jour à un court traité de botanique attrayant et imagé, ouvrage de vulgarisation destiné à mettre en relief les étonnantes merveilles du monde végétal. Elle termina vite cet opuscule, qui, tiré à un grand nombre d'exemplaires, lui rapporta une petite fortune. (402)

Transformed into a crypto-Edisonian artist, Louise's success in selling images of Africa to European audiences operates as a fictionalized rendition of Roussel's own artistic success, as Louise's bibliographic impressions of Africa recall their status as both linguistic descriptions and material constructs penned by Roussel's own writing process. Indeed, Roussel's hyperbolic descriptions function as text-based spectacle at both the linguistic and bibliographic levels: Roussel serially published *Impressions d'Afrique* and *Locus Solus* in the *Gaulois du Dimanche*, a Sunday literary periodical published in conjunction with the *Gaulois* journal. Roussel describes this publication process in economic terms himself, deploying the trope of prospecting to link the hunt for gold with the success of his spectacular weekly tales. He writes:

[I] devoted myself to prospecting for several years, during which time I published only (in *Gaulois du Dimanche*)... This prospecting tortured me and usually ended with my rolling around on the floor, raging against my failure to attain those sensations of art for which I had strived... *Impressions d'Afrique* appeared as a serial in *Gaulois du Dimanche* and went completely unnoticed. (23)

As a metafictional stand-in for Roussel the Edisonian writer, the spectacles of Louise, Canterel, Bex, Fuxier, and others serve as mass-spectacle entertainment; at the same time,

as linguistic constructs penned by Roussel in order to attract a readership, these reflexive renditions of his own writing are meant to serve as spectacles that will attract Roussel's own audience in the *Gaulois du Dimanche*. The narrative construction of Roussel's novels, composed through the concatenation of slightly related narrative vignettes, *récits*, or visual impressions, simultaneously operates as a bibliographic construct, in which a serialized narrative is composed of multiple spectacular stories that run over a given period of time (making Roussel's sensational fiction echo the sensational journalism that dominated French print journalism at the turn of the twentieth century, as we shall see in the following chapter). Roussel's serial vignettes textually replicate the methods of Méliès's short, fantastical set pieces. However, the ability of Roussel's characters to attract mass spectatorship was matched only by Roussel's historical failure to attract readers through the mass production and dissemination of his writing in the print media of his day. And yet the ties between the mass production of old media and print media run deeper than this; they operate at the procedural level, as well.

The ability of Roussel's characters to achieve fame through the industrial reproduction of their artwork evokes the changing methods of print production between 1910 and 1912, around which time both of Roussel's novels were published. Just as Louise's fictionalized financial success depends upon the technological reproducibility of both text and image at a mass scale, so too does Roussel's commitment to the serial publication format as an authorial prospector rely upon the mass printing techniques of print journalism in France. This link functions linguistically again through the double sense of the verb "impressioner," which can refer both to the process of exposing photography and the process of printing a book. Indeed, the production of print text was

radically transformed during the decades over which *Impressions d'Afrique* and *Locus Solus* were published due to changing text impression technologies. Deriving more profit from print publication required mechanizing the process of duplicating text, achieved through the introduction of the rotary press used to impress inked letters upon sheets of paper. This was a radical transformation from nineteenth-century print production techniques, namely the linotype, which required that blocks of text be assembled by hand. Increasing the profit margin of print journalism therefore required developing a mechanical method for arranging, organizing, and reproducing text: "Typographic compositors had, for a long time, considered the mechanical implementation of the succession of operations making up their work practically impossible" ("Les compositeurs typographes ont, pendant longtemps, considéré comme pratiquement impossible la réalisation mécanique de la succession des opérations constituées par leur travail"; Bellanger et. al. 64). This work fell into three general categories: choice and assembly (the physical ordering of one word after another), justification (margins and word spacing), and distribution (formatting multiple lines of text to construct a page). (Bellanger et. al. 64) The emergence of a process for mechanizing the above procedure enabled a rapid transformation of print journalism from the turn-of-the-century to World War I, as new printing techniques afforded the rapid production and distribution of many copies of the same text. The industrial revolution of printing press techniques paralleled similar advancements in the mass reproduction of sound, image, and film, making true of the printed word Edison's assertion that: "What I want is the manufacture of duplicates." (qtd. In Millard 86) Alongside photography, sound, and the moving image, the printed word entered the age of mechanical reproducibility: "Around 1900, the daily paper is an

'industrial product.'" ("Vers 1900, le journal quotidien est un 'produit industriel'"; Bellanger et. al. 129).

The industrial confluence of the printed word with other forms of old media does not operate solely through the drastic increase in the speed and scale of their production. It further inheres in the shared process of procedural inscription (*impression*) that made such increases possible. Just as the phonograph reproduced sound by impressing marks upon a rotating disc of wax paper, so too did the introduction of the rotary press enable the mass duplication of print text by rolling inked letters across the sheets of paper upon which their marks were inscribed and impressed. The unspooling of mass spectacles in early cinemas finds its bibliographic counterpart in the rotary impression of mass market spectacles such as Roussel's:

In the domain of the procedure in question, we will know a spectacular augmentation of production. If the preparation of the cylinders still remains lengthy in practice, as the gain in time per copy is in part hampered by rolling flat, following the dimension of the cylinders, the machine itself will, it must be emphasized, achieve impressive speeds and dimensions. (Bellanger et. al. 120)

Dans le domaine du procédé en question, nous allons connaître une augmentation spectaculaire de la production. Si la préparation des cylindres reste pratiquement toujours longue, car le gain de temps à la copie est en partie éperdu au bitumage par suite de la dimension des

cylindres, la machine elle-même va, il faut le souligner, atteindre des vitesses et des dimensions impressionnantes.

The introduction of rotative techniques into French printing houses occurred as the industrial revolution of print techniques began to near the onset of World War I, taking place between 1910 and 1912. This radically transformed the landscape of French journals and periodicals, including the launch of the first journal to print photographs in France using heliography, *Excelsior*, in 1910. Against this backdrop of changing print techniques, Roussel's fictional and bibliographic mission to impress his audience with spectacular *Impressions d'Afrique*, with a new spectacular tale, a new fantastical image, appearing each Sunday, is directly tied to the changing duplication techniques for textual impression in France. (Indeed, *Impressions d'Afrique* carries as yet another signification the descriptions and photographs of human rights abuse in the Congo that circulated in the decade before its publication, as documented by The Casement Report and E.D. Morel's *King Leopold's Rule in Africa*. In this context, Talou-Yaour's spectacular rule reads as an inversion of the governmental power exerted by King Leopold over the Congo Free State.) Rather functioning as a metaphor for the drive or desire to generate attention by producing more text, Roussel's mass production of fictionalized spectacle (through the procedural assembly of fantastical vignettes) is historically, materially enmeshed in the push for more content as old media became an industrial product: "If the rotary press exists, we must now, all while improving the quality of the impression, make it produce a grater number of pages, make it turn faster, and, for that matter, make sure at the same time of introducing illustrations without slowing the output of the paper" ("Si la rotative existe, il faut maintenant, tout en améliorant la qualité d'impression, lui faire

produire un plus grand nombre de pages, la faire tourner plus vite et, par ailleurs, veiller en même temps à accélérer la reproduction des formes imprimantes, à introduire les illustrations sans ralentir la sortie du journal” (Bellanger et. al. 93). At last, Roussel’s procedural hermeneutic (through its application to Roussel’s own Edisonian reproduction machines and, in turn, the text itself) reveals its status as a cryptographic placeholder for the mechanized printing procedures that transform Roussel’s language into a material, mass media product. Roussel’s Edisonian dream of mechanically reproducible text, rather than being fiction or fantasy, both thematizes and leaves encoded material traces of the historical push towards automated textual production during the time at which Roussel’s books were composed and published. This historical push for mass production is also the physical pushing or powering of rotating media inscription and transmission technologies.

Louise’s lab, Fuxier’s grapes, Canterel’s corpses, Malvina’s gramophone—all these and other linguistic descriptions of spectacular duplication techniques are themselves, at their physical and bibliographic levels, mass duplicated texts produced through the mechanical procedures of Raymond Roussel and Arthur Meyer’s *Gaulois du Dimanche*. Roussel’s novels exist as industrial commodities that contain the cryptographic keys to their own construction, revealing the extent to which their content is physically enmeshed in the changing commercial techniques of artistic production in the second decade of the twentieth century. From this vantage point, Roussel’s procedural hermeneutic reveals itself as both metaphor and material, offering a fictional account of art’s mass duplication that simultaneously operates as an encoded stream of physical operations that run through the composition, editing, and dissemination of the text itself.

The electric apparatuses of technological reproducibility—the gramophone, telegraph, kinestoscope, and linotype—recur as bibliographic ciphers masked beneath the guise of linguistic amusement (*divertissement*). Unspooling Roussel’s texts as industrial media therefore complicates and troubles the nature of reading itself after the turn of the twentieth century, revealing a strain of mechanical and procedural technics that alter the status of the printed word, particularly as it appears in French *journaux*.¹⁶ Here, reading and viewing apparatuses cannot be neatly disentangled from the cultural apparatuses of profit, spectacle, mass production, governmental authority, and sensational reporting that coincide with text’s emergence as a mass media enterprise. Deploying a procedural hermeneutic that exposes the bibliographic entanglement of text, context, and mechanized production facilitates modes of procedural reading that unveil linguistic constructs as physical, material entities generated through specific conditions of their historical moment (while also commenting on those conditions, in turn). In other words, book materiality performs, enacts, and unfolds the politics of its own modes and means of production and dissemination. This line of inquiry, specifically as it relates to the sensational methods of French print journalism, leads us from the inscrutable Raymond Roussel to the verbosity of his childhood neighbor, Marcel Proust. As Proust wrote to Roussel upon reading his first novel, *La Doublure*, “Like the Child Hero of the fable, you unfalteringly bear the weight of a formidable poetic apparatus...” (Ashbery 39).

Notes

¹ This process blends theories of textual representation with procedural methods, echoing this dissertation’s investment in explicitly blending theory with practice: “It is the case therefore of a quasi experimental text in which the critical act is born from an ongoing dialectic game between practice and theory, creating reciprocal exchanges of their

collective statuses” (“Il s’agit donc ici d’un texte, quasi expérimental, où l’acte critique naît d’un jeu dialectique constant entre pratique et théorie, entraînant des réciproques de leurs statuts respectifs”; Amiot 7).

- ² The relationship between writing and seeing also emerges through the concept of impression as the perception of form, rooted in the Platonic conceptions of understanding and remembering. Conducted equally through Platonic conceptions of form and Edisonian innovations in media inscription, the process of preserving form is etched, stamped, and molded into the medium of wax: “Let us call it the gift of the Muses' mother, Memory, and say that whenever we wish to remember something we see or hear or conceive in our own minds, we hold this wax under the perceptions or ideas and imprint them on it as we might stamp the impression of a seal ring. Whatever is so imprinted we remember and know so long as the image remains; whatever is rubbed out or has not succeeded in leaving an impression we have forgotten and do not know.” (Plato 897)
- ³ Roussel himself suggested there was a hidden meaning to his works; this in part inspired his efforts to adapt his novels into plays following their commercial failure in the *Gaulois du Dimanche* (not to mention his work revising and repackaging *Impressions d’Afrique* as the nested poem *Nouvelles Impressions d’Afrique*). John Asbhery confirms: "Roussel apparently believed that there was a concrete, hidden meaning to the work which the spectators might grasp if they could see it acted out before them." (xii)
- ⁴ Christielle Reggiani explains Roussel’s texts as cryptogrammic, calling for forms of reading that decode their encoded transmission. She writes:

One understands that the signal functions as an injunction, destined to guide an execution. If all text can be understood through reception, as Genette suggests, as a signal regulating its own reading, one sees that the specificity of the constrained text identifies itself, from this perspective, as the redoubling of a given configuration: the utterance of lexia of the procedure is a first signal, sent to the writer-"compiler", who commands to a certain extent its writing; the constrained text itself is received by its receiver as a second signal, who this time guides the interpretation.

On comprend que le signal fonctionne comme une injonction, destinée à guider une exécution. Si tout texte peut être compris à réception, ainsi que le suggère Genette, comme un signal réglant sa propre lecture, on voit que la spécificité du texte contraint s’identifie, dans cette perspective, au redoublement d’une telle configuration: l’énoncé des lexies du procédé est un premier signal, à destination de l’auteur-“exécutant”, qui commande dans une certaine mesure son écriture; le texte contraint lui-même est reçu par son récepteur comme un second signal, qui commande cette fois l’interprétation. (178-179)

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- ⁵ Such reflexive modes of textual construction and composition emerge through and around the literary use of ekphrasis, originally as a rhetorical device for anchoring public speech in political influence, “used to focus and amplify emotions, with the rhetor lingering over key aspect of an image in order to persuade his audience...All a rhetor’s examples or major points could be ‘placed’ in imagination in a particular part of a mental image.” Later developments include Keats’s romantic poetry (“Ode on a Grecian Urn”) and the representations of music on Thomas Mann’s *The Magic Mountain*. (“Ekphrasis” 772)
- ⁶ Douglas Kahn notes Roussel and Edison’s mutual attraction to historical figures: “Edison wanted most to hear Napoleon’s voice, many more wanted to hear the Word...Roussel if drawn to Dante, Shakespeare, the famous table turner Victor Hugo, Wagner, and Napoleon, all those with a resplendent star burning of their forehead.” (84)
- ⁷ Like Edison, Roussel was also fixated on the figure of Napoleon. His psychiatrist quotes him proclaiming that “I shall have a glory greater than that of Victor Hugo or Napoleon...this glory will reflect on all my works without exception...” (qtd. In Ashbery x)
- ⁸ Malvina’s use of Edisonian sound reproduction techniques echoes the historical significance of the gramophone and phonograph, which were used to access the voices of figures who had passed away. As Douglas Kahn explains: “...for the fifty years straggling 1900, it [the phonograph] was the machine of choice for repopulating the world by reanimating the dead, especially by returning celebrities, despots, and loved ones to that desperately exaggerated degree of vitality: glory.” (70)
- ⁹ Through a fantastical description of a hairless cat melding with the brain of a human, Roussel further fictionalizes the historical enmeshment of animal and human perception through the experimental procedures of sound reproduction and psychoacoustics:
- In the demonstration, Canterel fed the hairless cat a bright red pill made from a substance he had discovered while researching animal magnetism. The pill “temporarily changed the cat’s entire body into an extremely powerful electric battery.” The cat swam toward a metal cone that had several holes in it, placed his muzzle into the cone, and then proceeded to make contact with the cortical surface of Danton’s brain, passing along a charge through the cone. (qtd. In Millard 80)
- ¹⁰ For more on the current wars, see Waters (2010) at <https://youtu.be/3gOR91oentQ>
- ¹¹ Kittler argues: “Typewriters do not store an individual, their letters do not transmit a beyond which could be hallucinated by perfect alphabets as meaning. Everything which, since Edison’s two innovations, can be taken over by the technical media disappears out of the typescripts. The dream of a real, visible, or audible world arising from the words is over. The historical synchronicity of cinema, phonography, and typewriter separated the data flows of optics, acoustics, and writing and rendered them autonomous. The fact of this differentiation is not altered by the recent ability of electric or electronic media to bring them back together and combine them.” (44)

- ¹² Kenji Kitayama explains how the Black Maria reproduced the original kinescope design at the scale of a building:

The kinetoscope, where one could see a series of moving photos as "set at the bottom of a fountain pen" from a peep-hole, was the film projector for a film that had been shot in the studio called "Black Maria." Because this studio, whose interior walls were completely covered by black paper, contrasted the films that were shot there, the objects projected in these films showed us only the foreground, while never printing their contours.

Le Kinétoscope, où l'on pouvait regarder par un judas une série de photos mouvantes comme des vues "enchâssées au fond du porte-plume", était le projecteur d'un film qu'on avait tourné dans un studio dit "Black Maria." Parce que ce studio, dont les murs intérieurs étaient tout entiers couverts de papier noir, contrastant les films qu'on y avait tournés, les objets projetés dans ces films nous présentent seulement leurs premiers plans, en imprimant à jamais leurs contours. (189)

- ¹³ The same method was also deployed for *Locus Solus*, which is built through similar wordplay techniques as *Impressions d'Afrique*:

Locus Solus was written in a like manner. But there I hardly ever used anything but the evolutionary method. That is to say, I drew a series of images from the distortion of some random text, as in the examples from *Impressions d'Afrique* already cited. (16)

(*Locus Solus* lent itself to numerous word games: *Loufocus Solus*, *Cocus Solus*, *Blocus Solus ou les batons dans les Ruhrs*, *Lacus Salus* (apropos de Pierre Benoit's *Lac Salé*), *Locus Coolus*, *Coolus Solus* (apropos a play by Roman Coolus), *Gugus Solus*, *Locus Saoulus*, etc. One which was left out, and yet, it seems to me, merits inclusion, is *Logicus Solus*.)" (17)

- ¹⁴ Ferry's anagrammatic discoveries go still further:

Jean Ferry nonetheless surmised that règle de l'art (rule of art) suggested règle de lard (bacon ruler), hence Lucius Egroizard's measuring instrument made from pork fat. And chapelet (string of beads) provided the chat pelé (depilated cat) which, aided by a metal horn, galvanised Danton's head into speech. (qtd. In Ashbery 33)

- ¹⁵ Among the major documentary sources for Roussel's fiction are the works of Jules Verne, whom Roussel greatly admired:

And as for Roussel's technique of taking ' a random phrase from which I drew images by distorting it, a little as though it were a case of deriving them from the drawings of a rebus," we find in Verne's *Bourses de Voyage* "Rosam angelum letorum" distorted into "Rose a mange l'omelette au rhum." Similarly, many scenes and details in Verne's *Village Aerien* (1901) are duplicated nine years later in Roussel's *Impressions d'Afrique*...And so on... (Ashbery 36)

¹⁶ By revealing the mechanically reproducible nature of print journalism and literature in French *journaux*, Roussel's writing offers a mode of theoretical and methodological inquiry into the cultural and economic status of its mass duplicated contemporaries, confirming Christielle Reggiani's assertion that "After *How I Wrote Certain of My Books*, procedural texts offer themselves to the reader's questioning: they become manipulable, therefore mobile, but remain wrought by the construction of a closure that gives them every appearance of necessity" ("Après *Comment j'ai écrit certains de mes livres*, les textes à procédé s'offrent aux questionnement du lecteur: ils deviennent manipulables, donc mobiles, mais demeurent travaillés par la construction d'une clôture qui leur donne toutes les apparences de la nécessité"; 169).

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Playing Proust Backwards: The manuscript as film

Marcel Proust's *À la Recherche du Temps Perdu* includes a notable episode where Proust rereads his own manuscript in the same fashion that readers of *la Recherche* are invited to reread the novel itself. Offering a metafictional account of his writing, Proust inscribes a narrative episode that stands in synecdochic relation to the book into which it figures, writing:

No sooner had I finished this comforting perusal than I who had not had the courage to reread my manuscript, longed to begin reading it again immediately, for there is nothing like an old article by oneself of which one can say more aptly that "when one has read it one can read it again."
(783)

À peine eus-je fini cette lecture réconfortante, que moi, qui n'avais pas eu le courage de relire mon manuscrit, je souhaitai de la recommencer immédiatement, car il n'y a rien comme un vieil article de soi dont on puisse dire que « quand on l'a lu on peut le relire ». (2034)

The ouroborous process of reading that Proust describes in this scene mirrors the cyclical structure of *la Recherche* writ broad, which ends with Proust composing the opening pages of the novel. The narrative of the novel tracks Proust's own maturation from infancy to adulthood, in which Proust develops into a writer. Concluding with the author Proust writing the story of his life, the novel thus brings the reader back to its own opening pages to reconsider them from the position of the author. Much like his

childhood neighbor, Raymond Roussel, Marcel Proust uses writing to draw attention to the material conditions of his literary production.

Proust continues this metafictional vignette by qualifying the process of rereading as one enmeshed in the social relations of his time, imagining different readers differently interpreting his piece as they encounter it in the journal. This disposition echoes throughout the pages of la *Recherche*, which documents the changing social mores of French society across the nineteenth and twentieth centuries. In realist fashion, Proust writes the social and political conditions of his time. This sentiment is expressed in the novel's closing lines, in which Proust speaks of his characters "occupying a place, a very considerable place compared with the restricted one which is allotted to them in space, a place on the contrary immoderately prolonged—for simultaneously, like giants plunged into the years, they touch epochs that are immensely far apart, separated by the slow accretion of many, many days—in the dimension of Time." ("occupant une place si considérable, a côté de celle si restreinte qui leur est réservée dans l'espace, une place au contraire prolongée sans mesure puisqu'ils touchent simultanément, comme des géants plongés dans les années à des époques"; Proust 1140, Proust 2401). While this closing phrase articulates Proust's characters as embodiments of their time, it curiously performs Henri Bergson's claim in his 1922 *Duration and Simultaneity. With Reference to Einstein's Theory (Durée et simultanéité. À propos de la théorie d'Einstein)* that pre-Einsteinian philosophic writing conflates space and time. Although Proust argues that his characters occupy a larger place in time than in space, his description of such temporal scope relies on metaphors of space. Not only do his characters occupy a place in space, but they plunged into the years and touch epochs. The grammatical structure of Proust's

sentence therefore inverts its linguistic meaning, converting the passage of time into a spatial register. The simultaneous touching of his characters, as they stretch across the centuries and the pages of *la Recherche*, enacts Bergson's claim that "if we are to go looking in time for features like those of space, it is at space that we shall stop, at space that covers time and represents it visually for our convenience—we shall not have pushed on to time itself" ("si nous allons chercher au temps des caractères comme ceux de l'espace, c'est à l'espace que nous nous arrêterons, à l'espace qui recouvre le temps et qui le représente à nos yeux commodément nous n'aurons pas poussé jusqu'au temps lui-même"; Bergson 6, Bergson x). Proust's character development and plot beats are structured in such Bergsonian fashion, particularly through the use of leitmotifs that Proust uses to evoke key characters and set-pieces as variations on a given narrative theme. The closing vignette of the novel, in which Proust experiences involuntary memory while walking across two unevenly leveled flagstones, echoes the opening vignette in which Proust dips his madeleine into a cup of tisane (in this way, the closing vignette recalls the opening one, reflexively performing an act of involuntary remembering within the novel itself). Elsewhere, Proust uses a beauty mark to evoke the changing face of Albertine, frequently sees his friend Robert de Saint-Loup preceded by the monocle he always wears, and hears phrases from Vinteuil's *petite phrase*, written early in his career as a composer, echoed in the complex movements of his late *septuor*. As Proust hears Vinteuil, so too does this chapter read Proust, seeing the relation between his early and late work as variations on a literary structure that evolves throughout Proust's writing. It first examines that structure at work thematically in *À la recherche du temps perdu* before uncovering the bibliographic genesis of Proustian form through a

genetic reading of Proust's failed nineteenth-century novel, *Jean Santeuil*. That structure, evoked in the very title of *La Recherche*, sees the malleable relationship between time and space as a bibliographic medium for expressing the changing social conditions of Proust's epoch.

Proust's writerly play with the connections between time and space, simultaneity and succession, are evoked in the very title of his novel. In the French *temps* can alternately signify lived time, a period of time (an era or epoch), the metrical rhythm of a piece of music, verb tense, the weather, and the overall climate or feel of a given period. *À la recherche du temps perdu* suggests Proust as in search of all these things, themselves a succession or litany of related concepts that may simultaneously cohere. Proust plays with tense and time as if his writing were a musical piece, authoring literary rhythms and movements that, themselves, recall and echo across both the spatial distribution of Proust's written pages and the temporality of the reader's remembrance of the novel. This dynamic also characterizes the narratological construction of the novel, in which the aged Proust writes his memories of growing up as Marcel (critics frequently use "Proust" to refer to the novel's implied author and "Marcel" to refer to the protagonist, a convention I adopt in this chapter).¹ The novel thus occupies an uncertain generic status in which Proust is simultaneously writing fiction and an autobiography, and where Marcel exists simultaneously as a fictive construct and a historical figure. The novel therefore occupies an indeterminate generic category as a semi-fictional autobiography, prompting the reader to ponder the relationship between the historical Marcel Proust and the Proustian author (in this way, Proust also bears resemblances to Raymond Roussel, who writes himself into *Locus Solus* as Martial Canterel and the setting in which he wrote the novel

into the setting in which the novel is set). It is through the act of writing time, then, that Proust sets out, at the end of the novel (also the beginning), upon the journey to convert into writing himself and his world. Ultimately, it is this changing perception of time in the early twentieth century—as it is both shaped and registered by the advances of Proust's epoch—that Proust's writing conveys. The title *À la recherche du temps perdu* can thus be read not only as a descriptive marker of Proust's literature, but also the experimental aim of his writing process. (In French *recherche* can signify investigation, search, and research.)

Proust's *recherche* commences in the novel with the madeleine scene, through which Proust first enacts and introduces his concept of involuntary memory. In the scene, Proust dips a madeleine cake into a cup of herbal tea (tisane), the sensate experience of which causes Proust to re-experience a bodily sensation (and its associated sense memory) that he had long forgotten since childhood: that of eating the same treat as a child in his Aunt Léonie's house. This initial involuntary memory serves as the impetus for the voluntary, written recollection of his past life that continues from this point forward. Proust describes all of his childhood village unfolding in his teacup:

And just as the Japanese amuse themselves by filling a porcelain bowl with water and steeping in it little crumbs of paper which until then are without character or form, but, the moment they become wet, stretch themselves and bend, take on colour and distinctive shape, become flowers or houses or people, permanent and recognisable, so in that moment all the flowers in our garden and in M. Swann's park, and the water-lilies on the Vivonne and the good folk of the village and their little

dwellings and the parish church and the whole of Combray and of its surroundings, taking their proper shapes and growing solid, sprang into being, town and gardens alike, from my cup of tea. (36)

Et comme dans ce jeu où les Japonais s'amuse à tremper dans un bol de porcelaine rempli d'eau de petits morceaux de papier jusque-là indistincts qui, à peine y sont-ils plongés s'étirent, se contournent, se colorent, se différencient, deviennent des fleurs, des maisons, des personnages consistants et reconnaissables, de même maintenant toutes les fleurs de notre jardin et celles du parc de M. Swann, et les nymphéas de la Vivonne, et les bonnes gens du village et leurs petits logis et l'église et tout Combray et ses environs, tout cela qui prend forme et solidité, est sorti, ville et jardins, de ma tasse de thé. (46-47)

Proust's aesthetic description of the elements of his childhood—houses, people, flowers, gardens, and so on—free floating, as they blossom, in his cup of tea recalls the malleable connection between time and space evoked in the novel's title. The image of disconnected elements free floating in Marcel's circular teacup describes the fractured aesthetic of a kaleidoscope, a thematic motif that Proust deploys throughout the novel to describe the operation of his memory. The task of arranging this fragmented vision of his life into a chronological succession or narrative recollection is the one that lies before Proust, the implied author. Proust's fragmented vision here evokes the aesthetics of synthetic and analytic cubism, which attempted to convert temporal phenomenon into a spatial register (such as Marcel Duchamp's *Nude Descending a Staircase, No. 2*). The

task of arranging individual static visions such that they form a chronological narrative sequence is the work of film editing, which, as we shall see, permeates Proust's compositional process. This vision of the novel as cubist collage is suggested in the passage itself, which evokes the descriptive and narrative elements of the chapter ahead as floating fragments of paper before Proust's eyes. The bibliographic work of manipulating spatial elements to form coherent narrative chronologies thus mirrors the old media procedures of film editing, through which the concatenation of static frames produced the illusion of movement. This is a resemblance that Proust himself describes at length in *la Recherche*, through the old media of the magic lantern and the kaleidoscope. If Raymond Roussel's poetic apparatus is that of the rotary press, Marcel Proust's apparatus replicates the mechanics of film, and it is through this apparatus that Proust documents the political upheavals of turn-of-the-century French life. This chapter plays Proust backwards, reading the formal descriptions of Proust's filmic technique down to the forensic, material level, as it traces the evolution of Proustian time from his late to his early writing. In so doing, it demonstrates how and where the thematics of writing time recur at a material level across the evolution of Proust's writing process, in particular as that process attempts to capture two historically distinct moments (the *temps* of the opening decades of twentieth-century France, described through *la Recherche*, and that of late nineteenth-century France, documented in *Jean Santeuil*). Working through the politics of its filmic form, Proust's lifelong literary experiment, his *recherche*, captures and records the spirit of its times.

Writing Time in *À La Recherche du Temps Perdu*

Proust's kaleidoscopic, spatialized construction of temporality is emblemized through the recurring trope of the magic lantern. Preceding the advent of Edisonian cinema, the magic lantern was the first seeing technology available to the mass public. First assembled by Christian Juygens in the late 1650s and popularized in the following century, the magic lantern offered publics their first view of moving images. (Parkinson 11) The magic lantern operated through the mechanism of projection: a transparent, colored frame was inserted into the lantern, sitting between the source of light and the projection lens. Operators would then project the illuminated image onto the wall or screen of a darkened room. Developments in the magic lantern included the addition of movement: backlit frames could be slid next to each other in order to produce the illusion of motion (working through the same principle as motion picture film, though at a significantly slower rate). This produced moving pictures that fascinated viewers.

Proust's magic lantern both enacts and thematizes motion in the early pages of *la Recherche*. It becomes a core element of the *drame du coucher*, a key Proustian leitmotif that signals Proust's desire for the presence of a female figure, in this case his mother. In the *drame du coucher*, the child Marcel becomes anxious for the presence of his mother during bedtime, sending notes and hatching ploys to obtain her presence (the *drame* thus also thematizes Freud's description of the fort/da construction of permanence in children). To distract him during these moments of crisis, Marcel is given a magic lantern, a mechanism that itself plays upon presence and absence to create fantastical images. This play upon presence occurs both in the reception of the images on his bedroom wall (he imagines them as fantastic apparitions) and the procedural functioning

of the lantern, which involves inserting and removing frames in order to create the projections that fascinate Marcel. He is particularly engrossed in the motion of the horseman Golo upon his wall.² Through the lantern, the blackness of Marcel's bedroom becomes a projection chamber:

At Combray, as every afternoon ended, long before the time when I should have to go up to bed, and to lie there, unsleeping, far from my mother and grandmother, my bedroom became the fixed point on which my melancholy and anxious thoughts were centred. Some one had had the happy idea of giving me, to distract me on evenings when I seemed abnormally wretched, a magic lantern, which used to be set on top of my lamp while we waited for dinner-time to come: in the manner of the master-builders and glass-painters of gothic days it substituted for the opaqueness of my walls an impalpable iridescence, supernatural phenomena of many colours, in which legends were depicted, as on a shifting and transitory window. But my sorrows were only increased, because this change of lighting destroyed, as nothing else could have done, the customary impression I had formed of my room, thanks to which the room itself, but for the torture of having to go to bed in it, had become quite endurable. (7-8)

À Combray, tous les jours dès la fin de l'après-midi, longtemps avant le moment où il faudrait me mettre au lit et rester, sans dormir, loin de ma mère et de ma grand'mère, ma chambre à coucher redevenait le point fixe

et douloureux de mes préoccupations. On avait bien inventé, pour me distraire les soirs où on me trouvait l'air trop malheureux, de me donner une lanterne magique, dont, en attendant l'heure du dîner, on coiffait ma lampe; et, à l'instar des premiers architectes et maîtres verriers de l'âge gothique, elle substituait à l'opacité des murs d'impalpables irisations, de surnaturelles apparitions multicolores, où des légendes étaient dépeintes comme dans un vitrail vacillant et momentané. Mais ma tristesse n'en était qu'accrue, parce que rien que le changement d'éclairage détruisait l'habitude que j'avais de ma chambre et grâce à quoi, sauf le supplice du coucher, elle m'était devenue supportable. (17)

Through its role in the *drame du coucher*, the magic lantern becomes a Proustian device for spatializing time. It quite literally transforms the time during which Proust must be away from his mother and grandmother into a spatial exploration of his dark room. The lantern therefore functions as an affective chronometer, measuring the intervals during which Proust must be alone. In so doing, the lantern becomes an initial marker of Proust's subjectivity, signalling the difference between moments of comfort and anxiety (the first two experiences of his life Proust describes). Marcel's magic lantern is the first mechanical timekeeping device introduced in Proust's *Temps Perdu*.

More than a purely thematic marker of temporal movement, the aesthetic features of Proust's childhood projections represent duration in spatial terms. Proust compares the lantern to "a flickering and momentary stained glass window" ("un vitrail vacillant et momentané"). The kaleidoscopic arrangement of stained glass and magic lantern projections become indicators of both individual and historical memory, as Proust ties

them to his childhood memories of the gothic tower of Combray.³ The gothic projections of the magic lantern thus echo Proust's imagined images of the past, as well as the historical architecture of Combray itself. Proust writes:

To live in, Combray was a trifle depressing, like its streets, whose houses, built of the blackened stone of the country, fronted with outside steps, capped with gables which projected long shadows downwards, were so dark that one had, as soon as the sun began to go down, to draw back the curtains in the sitting-room windows; streets with the solemn names of Saints, not a few of whom figured in the history of the early lords of Combray, such as the Rue Saint-Hilaire, the Rue Saint-Jacques, in which my aunt's house stood, the Rue Sainte-Hildegarde, which ran past her railings, and the Rue du Saint-Esprit, on to which the little garden gate opened; and these Combray streets exist in so remote a quarter of my memory, painted in colours so different from those in which the world is decked for me to-day, that in fact one and all of them, and the church which towered above them in the Square, seem to me now more unsubstantial than the projections of my magic-lantern; while at times I feel that to be able to cross the Rue Saint-Hilaire again, to engage a room in the Rue de l'Oiseau, in the old hostelry of the Oiseau Flesché, from whose windows in the pavement used to rise a smell of cooking which rises still in my mind, now and then, in the same warm gusts of comfort, would be to secure a contact with the unseen world more marvellously

supernatural than it would be to make Golo's acquaintance and to chat with Genevieve de Brabant. (37)

À l'habiter, Combray était un peu triste, comme ses rues dont les maisons construites en pierres noirâtres du pays, précédées de degrés extérieurs, coiffées de pignons qui rabattaient l'ombre devant elles, étaient assez obscures pour qu'il fallût dès que le jour commençait à tomber relever les rideaux dans les « salles »; des rues aux graves noms de saints (desquels plusieurs se rattachaient à l'histoire des premiers seigneurs de Combray): rue Saint-Hilaire, rue Saint-Jacques où était la maison de ma tante, rue Sainte-Hildegarde, où donnait la grille, et rue du Saint-Esprit sur laquelle s'ouvrait la petite porte latérale de son jardin; et ces rues de Combray existent dans une partie de ma mémoire si reculée, peinte de couleurs si différentes de celles qui maintenant revêtent pour moi le monde, qu'en vérité elles me paraissent toutes, et l'église qui les dominait sur la Place, plus irréelles encore que les projections de la lanterne magique; et qu'à certains moments, il me semble que pouvoir encore traverser la rue Saint-Hilaire, pouvoir louer une chambre rue de l'Oiseau—à la vieille hôtellerie de l'Oiseau Flesché, des soupiraux de laquelle montait une odeur de cuisine qui s'élève encore par moments en moi aussi intermittente et aussi chaude—serait une entrée en contact avec l'Au-delà plus merveilleusement surnaturelle que de faire la connaissance de Golo et de causer avec Geneviève de Brabant. (47)

Proust incorporates cubist vision as both an aesthetic feature of the Combray church and an imagined vision of its architecture: echoing Delaunay's *Champ de Mars*, Proust describes the church from multiple perspectives, multiple streets around Combray. The church's kaleidoscopic visions of the past, depicted in its stained glass windows, simultaneously function as an object for Proust's literary cubism, which attempts to depict different spatial and temporal moments in Combray in an attempt to recapture the inaccessible past of Marcel's childhood. This cubist vision of Combray is also the same one first introduced through Proust's kaleidoscopic vision of all of Combray unfurling his cup of tisane. This cubist technique also becomes reinscribed in the structure of the novel itself. The opening volumes of *la Recherche* correspond to two different paths through Combray that Proust describes in the Overture: the Méséglise way and the Guermantes way. These two spatial paths through Combray become temporally sequenced through the order of the first and third volumes of Proust's *Search: Du Côté de Chez Swann* and *Le Côté de Guermantes*. This temporal sequence is also spatial: both volumes are put in physical relationship to each other across the pages of Proust's oeuvre. Proust's cubist vision of Combray is therefore transmuted into the physical arrangement of the novel's narrative pages and movements.

Proust deploys the magic lantern as both a subject and an object of cubist time in *la Recherche*, as the lantern itself becomes a recurring trope that Proust deploys as a leitmotif to signal the passage of time across the pages of his work. Proust recalls the magic lantern in the novel's final set-piece, the *bal de têtes*, a party in which Proust revisits the main characters of the novel long after they have aged. The participants' faces are doubly masked, first by the literal masks they wear when Proust enters the room and,

second, by the mask of time. Meditating on the multiple, superimposed faces that he sees on the same visage, Proust recalls the magic lantern as a trope that visualizes the passage of time. He describes:

...puppets bathed in the immaterial colors of years, puppets which exteriorized Time, Time which by Habit is made invisible and to become visible seeks bodies, which wherever it finds it seizes, to display its magic lantern upon them. As immaterial now as Golo long ago on the door-handle of my room at Combray, the new, the unrecognizable Argencourt was there before me as the revelation of Time, which by his agency was rendered partially visible... (1042)

...des poupées baignant dans les couleurs immatérielles des années, de poupées extériorisant le Temps, le Temps qui d'habitude n'est pas visible, qui pour le devenir cherche des corps et, partout où il les rencontre, s'en empare pour montrer sur eux sa lanterne magique. Aussi immatériel que jadis Golo sur le bouton de porte de ma chambre de Combray, ainsi le nouveau et si méconnaissable d'Argencourt était là comme la révélation du Temps, qu'il rendait partiellement visible... (2307)

Proust sees the face of M. d'Argencourt as a projection of Time's magic lantern, whose moving images compose the temporal duration of the lives of Proust's characters. Just as Golo's narrative progresses through the visual and spatial changes of the figure upon Marcel's childhood wall, so too do Proust and his fictional contemporaries age and change across the concatenated visions of Proust's narrative. At the same time, the

mention of Golo reminds the reader of the opening pages of the novel, inviting a reflexive consideration of the readerly time that has passed between that page and this. Here, the leitmotif of the magic lantern describes the passage of time while also marking its embodied, physical experience for the reader. Just as Proust recalls Marcel's childhood visions of Golo, so too does the recurring trope of the magic lantern invite the reader to consider the passage of time from the moment at which she read the *drame du coucher* to this page in the novel, constructing a temporal narrative that sequences the spatial passage of Proust's pages. This reflexive reading is further invited by Proust's comparison of his own fictional M. d'Argencourt to the character Golo. Like the backlit frames of the magic lantern, which Marcel slides past each other to make Golo move across his bedroom wall, the reader flips Proust's pages as she both constructs and inhabits the passage of Proust's *temps*.

Just as d'Argencourt, Proust, and others change and age as the reader progresses through each page of the novel, Golo is animated through the progression of the static frames of the magic lantern. The material procedure of the magic lantern enacts Proust's theory of time, whose passage is perceived through the difference between individual moments. In other words, just as cinematic vision is produced by setting multiple static frames beside each other, so too is Proustian time constructed through the concatenation of multiple versions of the self. Proust writes:

...we present on the contrary to the spectacle of life only a dubious vision, destroyed afresh every moment by oblivion, the former reality fading before that which follows it as one projection of a magic lantern fades before the next as we change the slide), all those mysteries which we

imagine ourselves not to know and into which we are in reality initiated almost every night, as we are into the other great mystery of annihilation and resurrection. (618)

...nous n'y offrons au contraire, au spectacle de la vie, qu'une vision douteuse et à chaque minute anéantie par l'oubli, la réalité précédente s'évanouissant devant celle qui lui succède comme une projection de lanterne magique devant la suivante quand on a changé le verre), tous ces mystères que nous croyons ne pas connaître et auxquels nous sommes en réalité initiés presque toutes les nuits ainsi qu'à l'autre grand mystère de l'anéantissement et de la résurrection. (645)

Time, in other words, is composed through a series of successive selves, like the stream of static frames of a film reel or slides of a magic lantern. In this regard, both the book and seeing technologies spatialize time. The spatial arrangement of a book (or manuscript's) pages orders their chronological sequence just as a film reel expresses the duration of the film through the spatial organization of the edited frames of film. While Proust uses the aesthetics of spatialized time to represent temporal change across *la Recherche*, such aesthetics also include the problem of reconciling Proust's own narrative progression with that of his other characters, particularly those whose presence he craves. From the perspective of Proustian time, the desire for presence involves the imaginary work of montage, through which one attempts to interpolate two spatially disjoint scenes to form a simultaneous narrative (this is also a visual problem addressed by the stereoscope). In this way, the fort/da anxiety of the *drame du coucher* becomes a

structural element of Proust's narrative, as he uses various communication and transportation technologies to attempt to reconcile the spatial difference between himself and his beloved.

Marcel's attempt to summon the presence of his beloved begins with the *drame du coucher*, when he sends letters to his mother at the dinner table to attempt to get her to come tuck him in before bed. This dynamic evolves throughout *la Recherche*, first through Marcel's communication with his grandmother and, later, with Albertine. In Balbec, Marcel communicates with his grandmother by knocking on their shared wall. These "trois petits coups" become a method of encoded communication across the two bedrooms, which Marcel uses to ensure the future presence of his grandmother. At the hour at which he supposes his grandmother might have awoken, though he is still worried about disturbing her sleep, Marcel risks three soft knocks against the wall to see if she is awake. His grandmother responds:

And scarcely had I given my taps than I heard three others, in a different intonation from mine, stamped with a calm authority, repeated twice over so that there should be no mistake, and saying to me plainly: "Don't get excited; I heard you; I shall be with you in a minute!" and shortly afterwards my grandmother appeared. (508)

À peine j'avais frappé mes coups que j'en entendais trois autres, d'une intonation différente de ceux-là, empreints d'une calme autorité, répétés à deux reprises pour plus de clarté et qui disaient: « Ne t'agite pas, j'ai

entendu, dans quelques instants je serai là »; et bientôt après ma grand'mère arrivait. (531)

While Marcel's attempt at communication involves summoning the presence of his grandmother, it also involves the imaginary attempt to reconcile the difference between Marcel's perception of his immediate surroundings and his inability to access his grandmother's lived experience in a space other than the one he currently occupies. This attempt to call his grandmother persists even beyond the grave, in a later scene where Marcel knocks on his grandmother's wall after she has passed away. Marcel's attempts to summon and conjure his grandmother, particularly through encoded communication by knocking and by telephone, affirms Helen Sword's excavation of the "twentieth-century focus on the affinities between otherworldly communication and such voice-and text-based technologies as the telephone, the telegraph, and the radio" and "a growing awareness, among modernist writers as well as modernist-era spiritualists, of writing as an act of mediumship and mediumship, conversely, as an act of authorship." (58) Indeed, Marcel's attempt to conjure his grandmother is also Proust's attempt to write her presence into being. Marcel's imaginary attempt to access the space of his grandmother's room recurs as part of the text itself, as Proust describes what might be happening in the room next door (in this way, Proust's attempt to communicate with his grandmother extends the difficulties with permanence present in the *drame du coucher*).

Marcel's attempt to communicate with his grandmother extends from the cryptomorse code communication of their knocking to telephone conversations between Balbec and Paris. Marcel phones his grandmother and is shocked to find he does not recognize her voice. Through the telephone, Marcel hears the voice of a tired, aged woman, who

could be anyone's grandmother, rather than his own. More than this, Marcel struggles with to grasp their respective frames of reference, himself at the sunny Balbec resort and his grandmother under the gray, Parisian sky. Proust writes:

Like all of us nowadays I found not rapid enough for my liking in its abrupt changes the admirable sorcery for which a few moments are enough to bring before us, invisible but present, the person to whom we have been wishing to speak, and who, while still sitting at his table, in the town in which he lives (in my grandmother's case, Paris), under another sky than ours, in weather that is not necessarily the same, in the midst of circumstances and worries of which we know nothing, but of which he is going to inform us, finds himself suddenly transported hundreds of miles (he and all the surroundings in which he remains immured) within reach of our ear, at the precise moment which our fancy has ordained. (809)

Comme nous tous maintenant, je ne trouvais pas assez rapide à mon gré, dans ses brusques changements, l'admirable féerie à laquelle quelques instants suffisent pour qu'apparaisse près de nous, invisible mais présent, l'être à qui nous voulions parler, et qui restant à sa table, dans la ville qu'il habite (pour ma grand'mère c'était Paris), sous un ciel différent du nôtre, par un temps qui n'est pas forcément le même, au milieu de circonstances et de préoccupations que nous ignorons et que cet être va nous dire, se trouve tout à coup transporté à des centaines de lieues (lui et toute

l'ambiance où il reste plongé) près de notre oreille, au moment où notre caprice l'a ordonné. (847-848)

Recalling their communication by knocking, Marcel's imagination and Proust's own writing attempt to unite the disjoint spaces of Balbec and Paris into one frame of reference, reaching toward the work of literary montage. As Marcel's communication technologies advance, from letter writing, to knocking, to the telephone, Proust's writing attempts to cover increasingly distant spaces and characters through its filmic technae. Through the telephone, this attempt reaches its limit; Marcel's first telephone conversation is with another grandmother who is attempting to speak with a different grandson, though it takes a few moments for Marcel to realize what has taken place:

Scarcely had he uttered these words when a messenger came for me from my hotel; the telephone operator had sent to find me. I ran to the post office, for it was nearly closing time. The word 'trunks' recurred incessantly in the answers given me by the officials. I was in a fever of anxiety, for it was my grandmother who had asked for me. The office was closing for the night. Finally I got my connexion. "Is that you, Granny?" A woman's voice, with a strong English accent, answered: "Yes, but I don't know your voice." Neither did I recognise the voice that was speaking to me; besides, my grandmother called me *tu*, and not *vous*. And then all was explained. The young man for whom his grandmother had called on the telephone had a name almost identical with my own, and was staying in an annex of my hotel. This call coming on the very day on which I had been telephoning to my grandmother, I had never for a moment doubted that it

was she who was asking for me. Whereas it was by pure coincidence that the post office and the hotel had combined to make a twofold error. (812-813)

À peine disait-il ces mots qu'on vint me chercher de mon hôtel; on m'avait demandé de la poste au téléphone. J'y courus car elle allait fermer. Le mot interurbain revenait sans cesse dans les réponses que me donnaient les employés. J'étais au comble de l'anxiété car c'était ma grand'mère qui me demandait. Le bureau allait fermer. Enfin j'eus la communication. « C'est toi, grand'mère? » Une voix de femme avec un fort accent anglais me répondit: « Oui, mais je ne reconnais pas votre voix. » Je ne reconnaissais pas davantage la voix qui me parlait, puis ma grand'mère ne me disait pas « vous ». Enfin tout s'expliqua. Le jeune homme que sa grand'mère avait fait demander au téléphone portait un nom presque identique au mien et habitait une annexe de l'hôtel. M'interpellant le jour même où j'avais voulu téléphoner à ma grand'mère, je n'avais pas douté un seul instant que ce fût elle qui me demandât. Or c'était par une simple coïncidence que la poste et l'hôtel venaient de faire une double erreur. (851)

Here, Proust's versioned theory of the self becomes subject to its own fragmented, cubist structure, as the self becomes but one possibility among a number of compossible other selves. In other words, Proust's inability to reconcile the space of Paris with that of Balbec creates multiple permutations of the same scene, amongst which Marcel and Proust alike will never be able to decide. The weather might be overcast; his grandmother

might be tired; his grandmother might be awake; the grandmother might not be his at all: the circumstances of Marcel's telephone conversation become unknowable, forcing a crisis of the Proustian desire for presence. Like the turn of the magic lantern, the telephone (and the Proustian morse code from which it originates) presents both Marcel the character and Proust the writer with multiple possible scenes that, mirroring the operation of a kaleidoscope, cohere into versioned narrative options. Reading turns in Proust's narrative as turns of a magic lantern frame incorporates the thematized connection between technology and proxemics into the structure of *la Recherche* itself. The crisis of Proustian desire thus simultaneously functions as a crisis of Proustian narrative: like the kaleidoscopic images of a magic lantern, the desire to fully know the other offers multiple permutations amongst which Proust will never be able to choose.

In addition to structuring Marcel's attempts to connect to his grandmother, the magic lantern equally informs the Proustian jealousy that structures Marcel's relationship to his lover, Albertine. Here, too, the magic lantern functions as both a thematic allusion described in Proust's writing and a narrative form that structures such writing. In his first encounters with Albertine at Balbec, Marcel views her amongst "la petite bande des jeunes filles," a young cohort of girls who run and jump around the Balbec resort together. Proust initially cannot distinguish individual faces in the group, meaning that Albertine's face exists as one possible image amongst a fragmented cubist vision of the larger gang. In these scenes, Proust describes the *petite bande* as having one shared face, which eventually splinters into the individual faces of its members as he becomes more familiar with the group. The visual logic of cubist interpolation extends to Albertine's face even after Marcel knows her individually. Every time Marcel encounters Albertine,

he notices her sole beauty mark in a different location on her face; this shifting vision transforms Albertine into a motile Picasso-esque portraiture whose features move with readerly turns of the page (and writerly turns of recalled memory, or illuminated images of the past). Albertine's changing face as an artistic object is more than a passing note; Marcel first gets to know her through their mutual friend, Elstir, an impressionist painter and mentor to the young Marcel:

These were now memories, that is to say pictures neither of which now seemed to me any more true than the other. But, to make an end of this first afternoon of my introduction to Albertine, when trying to recapture that little mole on her cheek, just under the eye, I remembered that, looking from Elstir's window, when Albertine had gone by, I had seen the mole on her chin. In fact, whenever I saw her I noticed that she had a mole, but my inaccurate memory made it wander about the face of Albertine, fixing it now in one place, now in another. (657-658)

C'étaient maintenant des souvenirs, c'est-à-dire des tableaux dont l'un ne me semblait pas plus vrai que l'autre. Pour en finir avec ce premier soir de présentation, en cherchant à revoir ce petit grain de beauté sur la joue au-dessous de l'oeil, je me rappelai que de chez Elstir, quand Albertine était partie, j'avais vu ce grain de beauté sur le menton. En somme, quand je la voyais, je remarquais qu'elle avait un grain de beauté, mais ma mémoire errante le promenait ensuite sur la figure d'Albertine et le plaçait tantôt ici tantôt là. (686)

In his changing recollection of Albertine, Proust incorporates the features of her face as artistic *tableaux* that form his memories of her, *tableaux* whose relation to each other echoes that of the changing images of a magic lantern narrative. Proust's attempt to fully capture the uncertain looks and circumstances of Albertine produces the same crisis of desire present in his relationship with his mother and grandmother: it creates multiple permutations of reality, multiple unknowable details about Albertine, amongst which Marcel the lover and Proust the writer must attempt to choose. Like the magic lantern, Albertine is simultaneously an artistic subject and object, a synecdoche of Proust's writerly attempt to join variant static frames into a fluid narrative sequence.

The cubist description of Marcel's desire for Albertine recurs as a narrative structure during their cohabitation in Marcel's Paris apartment. From the opening sentence of this volume, *La Prisonnière*, Proust's writing registers variant temporal sequences at the level of spatial sentence structure. The volume begins "At daybreak, my face still turned to the wall, and before I had seen above the big inner curtains what tone the first streaks of light assumed, I could already tell what sort of day it was" ("Dès le matin, le tête encore tournée contre le mur et avant d'avoir vu, au-dessus des grands rideaux de la fenêtre, de quelle nuance était la raie du jour, je savais déjà le temps qu'il faisait"). (383, 1609) The combination of "dès" (as soon as) "le matin" and the past continuous "savais déjà" (already knew) creates an uncertain situation in which Marcel already knew the climate before the morning or since the beginning of the morning. Nested within this uncertain temporal frame is yet another that complicates it; Marcel's head is against the wall either "again," "now," or "still," and this takes place "before having seen" the daylight. The phrase "avant d'avoir vu" locates the perception of

daylight as a future recollection of the past that occurs after Marcel's head is turned against the wall. Yet Marcel's head is either against the wall before this recollection, at multiple points before and after it takes place, or in the present moment. Like the shifting frames of a magic lantern or the changing *tableaux* of Albertine's face, the shifting temporal frames that form Proust's sentence allow for multiple chronological sequences that resolve Proust's grammatical uncertainties. Proust's syntactic structure thus enacts and performs the scene it describes: Marcel stands all morning with his head against the wall, ruminating on the state of his relationship with Albertine. This structure invites a rereading of the sentence's final word: *temps*. While it immediately refers to the weather outside, the word also signifies "time," making the sentence itself a description of the fragmented time that characterizes Marcel's relationship with Albertine. And like the title of the novel, *temps* here also signifies climate, moment, or overall atmosphere. The temporal fragmentation that characterizes Proust's writing of Albertine demonstrates Marcel's frustrated, jealous attempt to resolve the temporal and spatial distances that keep them apart. Throughout the volume, Marcel keeps Albertine trapped in his apartment and jealously spies on her when she sneaks out to see her friends. Like the time he lives, Marcel's relationship with Albertine is disconnected, fragmented, and incomplete; the forecast is not good.

Throughout the *Roman d'Albertine*, Marcel's jealousy stretches the permutations of Proustian reality to their narrative and emotional limit. When Albertine sneaks out, Marcel uses various technological strategies to discern her unknowable actions: telephoning friends, sending telegrams, and even attempting to spy on Albertine directly.⁴ In this way, Marcel's communication with Albertine upends the previous dynamic

between Marcel and his grandmother.⁵ Whereas Marcel lovingly telephoned his grandmother in her Paris apartment from abroad, here Marcel jealously telephones from the same apartment to discern activities occurring outside its walls. This technologically-mediated attempt to discern and resolve the multiple compossible actions of Albertine is also a writerly one—Proust incorporates the imaginative work of the jealous montage into his attempts to document Albertine's unknowable whereabouts:

It is one of the faculties of jealousy to reveal to us the extent to which the reality of external facts and the sentiments of the heart are an unknown element which lends itself to endless suppositions. We suppose that we know exactly what things are and what people think, for the simple reason that we do not care about them. But as soon as we feel the desire to know, which the jealous man feels, then it becomes a dizzy kaleidoscope in which we can no longer make out anything. Had Albertine been unfaithful to me? With whom? In what house? Upon what day? The day on which she had said this or that to me? When I remembered that I had in the course of it said this or that? I could not tell. Nor did I know what were her sentiments towards myself, whether they were inspired by financial interest, by affection. And all of a sudden I remembered some trivial incident, for instance that Albertine had wished to go to Saint-Mars le Vêtu, saying that the name interested her, and perhaps simply because she had made the acquaintance of some peasant girl who lived there. (747)

C'est un des pouvoirs de la jalousie de nous découvrir combien la réalité des faits extérieurs et les sentiments de l'âme sont quelque chose d'inconnu qui prête à mille suppositions. Nous croyons savoir exactement ce que sont les choses et ce que pensent les gens, pour la simple raison que nous ne nous en soucions pas. Mais dès que nous avons le désir de savoir, comme a le jaloux, alors c'est un vertigineux kaléidoscope où nous ne distinguons plus rien. Albertine m'avait-elle trompé? avec qui? dans quelle maison? quel jour? celui où elle m'avait dit telle chose? où je me rappelais que j'avais dans la journée dit ceci ou cela? je n'en savais rien. Je ne savais pas davantage quels étaient ses sentiments pour moi, s'ils étaient inspirés par l'intérêt, par la tendresse. Et tout d'un coup je me rappelais tel incident insignifiant, par exemple qu'Albertine avait voulu aller à Saint-Martin-le-Vêtu, disant que ce nom l'intéressait, et peut-être simplement parce qu'elle avait fait la connaissance de quelque paysanne qui était là-bas. (1994-1995)

Proust incorporates the trope of kaleidoscopic vision into his description of jealous imagination. At the same time, the visual trope of the kaleidoscope also recurs in the narrative structure of Proust's description, which spatially arranges multiple possible lines of inquiry that resist resolution into a coherent whole, offering instead a fragmented view of reality marked by multiple possible accounts of truth (a structure that, as we shall see, operates at both aesthetic and political registers). The interrelation of the desire for truth, fabricated accounts of reality, and the visual trope of kaleidoscopic vision (via the magic lantern) recurs throughout *la Recherche*, with Albertine as one of its central

figures. The figure of Albertine therefore serves as a narrative catalyst for the n-dimensional nature of Proust's writing, creating episodes in which Marcel (the character) and Proust (the writer) express a desire to cross the spatial and temporal separation between themselves and Albertine, and in so doing fabricate accounts of Albertine's life that paper over gaps where she is absent. Proust uses the magic lantern as an extended metaphor to theorize his memories of Albertine, casting her image as an illuminated projection upon the white space of his paper pages:

Sometimes, by a defect in the internal lighting which spoiled the success of the play, the appearance of my memories on the stage giving me the illusion of real life, I really believed that I had arranged to meet Albertine, that I was seeing her again, but then I found myself incapable of advancing to meet her, of uttering the words which I meant to say to her, to rekindle in order to see her the torch that had been quenched, impossibilities which were simply in my dream the immobility, the dumbness, the blindness of the sleeper—as suddenly one sees in the faulty projection of a magic lantern a huge shadow, which ought not to be visible, obliterate the figures on the slide, which is the shadow of the lantern itself, or that of the operator. (760-761)

Parfois, par un défaut d'éclairage intérieur lequel, vicieux, faisait manquer la pièce, mes souvenirs bien mis en scène me donnant l'illusion de la vie, je croyais vraiment avoir donné rendez-vous à Albertine, la retrouver; mais alors je me sentais incapable de marcher vers elle, de proférer les

mots que je voulais lui dire, de rallumer pour la voir le flambeau qui s'était éteint—impossibilités qui étaient simplement, dans mon rêve, l'immobilité, le mutisme, la cécité du dormeur—comme brusquement on voit dans la projection manquée d'une lanterne magique une grande ombre, qui devrait être cachée, effacer la silhouette des personnages, et qui est celle de la lanterne elle-même, ou celle de l'opérateur. (2010)

Proust deploys the magic lantern as a formal mechanism for his imaginary and writerly attempt to capture Albertine (it is no mistake that the first volume of the *Roman d'Albertine* is called *La Prisonnière*). In his attempt to understand Albertine, Marcel inserts imaginary accounts of their relationship into his memory equally as Proust incorporates these false memories as part of his narrative (the causal connection between these occurrences, whether Marcel's revelation inspires Proust's writing or Proust's writing causes Marcel's revelation, is, in high Proustian fashion, left uncertain). The conflation between fantasy and reality further figures into the description of Proust's extended metaphor: it is the shadow cast by the lantern or the lantern operator that breaks the illusion that the projected image can be touched or experienced, that it is possible. This conflation marks the metaphor as a reflexive writing moment, in which Proust's attempt to write Marcel's fantasy into being fabricates an imagined narrative that almost passes for truth. Indeed, this slippage between fiction and truth structures the narratological slippage between Marcel the protagonist and Proust the writer that structures the novel itself, as well as the novel's very generic status as a literary novelization of Marcel Proust's historical life. As Joshua Landy argues, critics often take for granted that Marcel the protagonist matures into the historical figure of Marcel Proust,

although the novel itself marks subtle distinctions between each figure and his writing (complicating straightforward readings of *la Recherche* as biography). In Marcel and Proust's attempts to possess Albertine, the reader witnesses Marcel Proust attempt to write imaged elements of his historical experience into existence. Far from being an arbitrary occurrence, the tenuous relationship between fiction and non-fiction, and the documentary difficulties that stem from attempting to separate one from the other, is central to the social and political climate of Proust's time.

Beyond describing how temporal, spatial, and interpersonal experiences are structured by the changing conditions of technological mediation, Proust welds that structure into the material fabric of his pages. In so doing, he constructs *À La Recherche du Temps Perdu* as at once a writerly experiment to recover his fading memories and a physical artifact that produces and documents forms of temporal and spatial experience characteristic of the *temps* in which Proust writes. Marcel's experiences with technology and time therefore compose part of a formal structure symptomatic of the *temps* (the time, the climate, and the period) Proust writes into being. The problem of writing time thus doubles as the problem of writing a historical period:

What came to my rescue against this image of the laundress, was certainly when it had endured for any while—the image itself, because we really know only what is novel, what suddenly introduces into our sensibility a change of tone which strikes us, the things for which habit has not yet substituted its colourless facsimiles. But it was, above all, this subdivision of Albertine in many fragments, in many Albertines, which was her sole mode of existence in me. Moments recurred in which she had merely been

good, or intelligent, or serious, or even addicted to nothing but sport. And this subdivision, was it not after all proper that it should soothe me? For if it was not in itself anything real, if it depended upon the successive form of the hours in which it had appeared to me, a form which remained that of my memory as the curve of the projections of my magic lantern depended upon the curve of the coloured slides, did it not represent in its own manner a truth, a thoroughly objective truth too, to wit that each one of us is not a single person, but contains many persons who have not all the same moral value and that if a vicious Albertine had existed, it did not mean that there had not been others, she who enjoyed talking to me about Saint-Simon in her room, she who on the night when I had told her that we must part... (754)

Ce qui vint à mon secours contre cette image de la blanchisseuse, ce fut—certes quand elle eut un peu duré—cette image elle-même parce que nous ne connaissons vraiment que ce qui est nouveau, ce qui introduit brusquement dans notre sensibilité un changement de ton qui nous frappe, ce à quoi l'habitude n'a pas encore substitué ses pâles fac-similés. Mais ce fut surtout ce fractionnement d'Albertine en de nombreux fragments, en de nombreuses Albertines, qui était son seul mode d'existence en moi. Des moments revinrent où elle n'avait été que bonne, ou intelligente, ou sérieuse, ou même aimant plus que tout les sports. Et ce fractionnement, n'était-il pas, au fond, juste qu'il me calmât? Car s'il n'était pas en lui-

même quelque chose de réel, s'il tenait à la forme successive des heures où elle m'était apparue, forme qui restait celle de ma mémoire comme la courbure des projections de ma lanterne magique tenait à la courbure des verres colorés, ne représentait-il pas à sa manière une vérité, bien objective celle-là, à savoir que chacun de nous n'est pas un, mais contient de nombreuses personnes qui n'ont pas toutes la même valeur morale, et que, si l'Albertine vicieuse avait existé, cela n'empêchait pas qu'il y en eût eu d'autres, celle qui aimait à causer avec moi de Saint-Simon dans sa chambre; celle qui, le soir où je lui avais dit qu'il fallait nous séparer...

(2002-2003)

Like the introduction of the telephone, Marcel's changing impressions of Albertine, his imaginative *tableaux*, serve as markers to measure historical change. Each new impression of Albertine serves as a new static frame introduced into the magic lantern projection—or film reel—of their history, just as the introduction of the magic lantern itself (as well as the telephone, the train, and the airplane) introduce radically new experiences of the present that mark the past as passed.⁶ Proust anchors this changing perception of the present, characteristic of the social and technological developments of the early twentieth century, in the filmic vision of the turning kaleidoscope. Like Marcel's changing impressions of Albertine, Proust writes his social milieu's changing impressions of controversial political figures and upheavals:

These new arrangements of the kaleidoscope are produced by what a philosopher would call a 'change of criterion.' The Dreyfus case brought about another, at a period rather later than that in which I began to go to

Mme. Swann's, and the kaleidoscope scattered once again its little scraps of colour. Everything Jewish, even the smart lady herself, fell out of the pattern, and various obscure nationalities appeared in its place. The most brilliant drawing-room in Paris was that of a Prince who was an Austrian and ultra-Catholic. If instead of the Dreyfus case there had come a war with Germany, the base of the kaleidoscope would have been turned in the other direction, and its pattern reversed. The Jews having shewn, to the general astonishment, that they were patriots also, would have kept their position, and no one would have cared to go any more, or even to admit that he had ever gone to the Austrian Prince's. All this does not, however, prevent the people who move in it from imagining, whenever society is stationary for the moment, that no further change will occur, just as in spite of having witnessed the birth of the telephone they decline to believe in the aeroplane. Meanwhile the philosophers of journalism are at work, castigating the preceding epoch, and not only the kind of pleasures in which it indulged, which seem to them to be the last word in corruption, but even the work of its artists and philosophers, which have no longer the least value in their eyes, as though they were indissolubly linked to the successive moods of fashionable frivolity. The one thing that does not change is that at any and every time it appears that there have been 'great changes.' (394-395)

Ces dispositions nouvelles du kaléidoscope sont produites par ce qu'un philosophe appellerait un changement de critère. L'affaire Dreyfus en amena un nouveau, à une époque un peu postérieure à celle où je commençais à aller chez Mme Swann, et le kaléidoscope renversa une fois de plus ses petits losanges colorés. Tout ce qui était juif passa en bas, fût-ce la dame élégante, et des nationalistes obscurs montèrent prendre sa place. Le salon le plus brillant de Paris fut celui d'un prince autrichien et ultra-catholique. Qu'au lieu de l'affaire Dreyfus il fût survenu une guerre avec l'Allemagne, le tour du kaléidoscope se fût produit dans un autre sens. Les Juifs ayant, à l'étonnement général, montré qu'ils étaient patriotes, auraient gardé leur situation, et personne n'aurait plus voulu aller ni même avouer être jamais allé chez le prince autrichien. Cela n'empêche pas que chaque fois que la société est momentanément immobile, ceux qui y vivent s'imaginent qu'aucun changement n'aura plus lieu, de même qu'ayant vu commencer le téléphone, ils ne veulent pas croire à l'aéroplane. Cependant, les philosophes du journalisme flétrissent la période précédente, non seulement le genre de plaisirs que l'on y prenait et qui leur semble le dernier mot de la corruption, mais même les oeuvres des artistes et des philosophes qui n'ont plus à leurs yeux aucune valeur, comme si elles étaient reliées indissolublement aux modalités successives de la frivolité mondaine. La seule chose qui ne change pas est qu'il semble chaque fois qu'il y ait « quelque chose de changé en France. » (412-413)

Proust's description of the public's changing impressions of their times also describes drastic changes in public writing, in which the rapid dissemination of journalism, philosophy, and literature both shapes and registers equally rapid shifts in public opinion. Proust describes this dynamic in depth throughout *la Recherche*, anchoring his account of sensational writing in the changing conditions and public perceptions of the Dreyfus Affair. Proust therefore describes a historical moment in which the public perception of historical and political reality takes the form of the kaleidoscopic magic lantern, where the constant introduction of rapidly new elements reveals reality as shaped by phantasmic speculations (projections) that attempt to fill unknowable gaps in knowledge. The public values, morals, and norms that Proust describes are subject to the same mode of kaleidoscopic construction as the technologies that shape their dissemination (the telephone, the telegram, the print newspaper, and so on).

Much like Raymond Roussel, who incorporates the mechanics of sensational print journalism into his works, the structure, content, and genre of Proust's writing enacts a critique of cognate forms of writing to which it is contemporary. Marcel's changing views of his grandmother, of Albertine, of M. d'Argencourt, and so on, are an effect of the same disjoint forms of writing that both document and influence changing perceptions of public life. The mechanics of technology register and enact this fragmented form, making Proust's cubist novel a physical expression of the rapid historical change it describes. Meeting the goals of its proposed experimental aim, *À La Recherche du Temps Perdu* is a bibliographic magic lantern whose mechanics reproduce the temporal, technological, and (as we shall soon see) political experience of Proust's time.

Proust's magic lantern manuscripts

Proust's experimental *recherche du temps perdu* succeeds in writing the *temps* of early twentieth century French life into being. This link between writing and time is more than metaphor, as Proust embedded his fragmented and filmic construction of chronology into the novel's own writing process. The aesthetics and mechanics of time discussed in Proust's writing functions as thematic concretizations of Proust's material writing method. By reproducing the mechanics of time, as he describes them, in the bibliographic genesis of those descriptions, Proust constructs his manuscripts through the procedures of the magic lantern and the kaleidoscope. Proust is, quite literally, writing time:

These uses of fragmented and picelike words in la *Recherche*, almost never designate a text, but almost always instead a salon, a face, a landscape; but if we find therein the same structures, the same divisions and the same antagonisms, it is that the concrete universe of the novel precisely reproduces the form of the manuscript and the conception, as much material and theoretical, that Marcel Proust made of his work in the process of composition, and of the work of art in itself.

...ces emplois des mots fragment et morceau dans la *Recherche*, ne désignent presque jamais un texte, mais presque toujours au contraire un salon, un visage, un paysage; or si nous y retrouvons les mêmes structures, les mêmes répartitions et les mêmes antagonismes, c'est que l'univers concret du roman reproduit exactement la forme du manuscrit et la conception, aussi bien matérielle que théorique, que Marcel Proust se

faisait de son œuvre en cours de rédaction; et de l'œuvre d'art en soi.

(Fraisie 319)

While Proust's *Recherche du temps perdu* reads as an aesthetically unified novel, whose passages and leitmotifs echo each other across the pages and across the intermittences of readerly time, this operatic structure is, at the bibliographic level, deeply fractured. Proust wrote *la Recherche* in kaleidoscopic fashion, authoring *Du Côté de Chez Swann* and *Le Temps Retrouvé* at the same time, and gradually adding the volumes that come between those bookends as the shape of the novel evolved during the course of WWI. Proust's writing process did not end with the final volume, but instead with the *roman d'Albertine*, which, as Christine Cano explains, was not fully edited at the time of Proust's death (with Proust himself proposing to cut the bulk of *Albertine Disparue* at one point in the process). This non-linear structure extends to the physical pages of Proust's *cahiers*, in which Proust wrote narrative vignettes out of sequence and in multiple spatial arrangements on each page. As Elena Pierrazo and Julie André reveal, the linear sequence of text the reader encounters in print volumes of *la Recherche* is the result of non-linear pathways through the fragmented and scattered bits of text, additions, excisions, and notes that form Proust's kaleidoscopic manuscripts.⁷ Jacques Rivière confirms the n-dimensional nature of the Proustian manuscript, writing:

It is the astonishing suppleness of the proustian material that this cutting confirms; it is the multiple possibilities for composition, for decomposition or for recomposition that the text itself of *la Recherche* offers, as if the book, as we read it, were but one version among many

others of an infinitely transformable or moreover transmutable text: text in transit, in tram, up until la Raspelière and well beyond...

c'est l'étonnante souplesse, que ce découpage confirme, du matériau proustien; ce sont les multiples possibilités de composition, de décomposition ou de recomposition qu'offre le texte même de la *Recherche*, comme si le roman, tel que nous le lisons, n'était qu'une version parmi beaucoup d'autres d'un texte original indéfiniment transformable ou plutôt transmutable: texte en transit, en tram, jusqu'à la Raspelière et bien au-delà... (qtd. in Fraisse 96)

Proust's aesthetic and theoretical account of his *temps* is therefore registered at both the thematic and material levels of la *Recherche*, existing as both written description and writerly operation. The politics of mechanized time that Proust writes into being, through which the truth of a given event exists in multiple compossible variations, is at the same time a politics of the material structure of Proust's writing. Proust's material manuscripts, which can be reordered and rearranged to form multiple potential chronologies, enact and perform Proust's argument that the writing of his time reflects transmutable perceptions of historical reality. As a fragmented novel, la *Recherche* thus stands as an experimental instantiation of politicized form. Yet this writing experiment is itself the result of an earlier failed attempt, one that was not uncovered until decades after Proust's death.

Nearly a quarter of a century after Proust's passing in 1922, his niece opened a cabinet in her home to reveal stacks of notebooks and piles of torn draft pages that had been hidden away since the close of the nineteenth century.⁸ The mass of archival

material, generated more than two decades before the appearance of *Du côté de chez Swann*, composed the manuscript pages of Proust's nineteenth century novel—a novel Proust never finished. The status of the manuscript materials that compose Proust's unfinished early novel embody Proust's non-linear construction of *le temps*. The narrative is fragmented across torn stacks of paper and seventy notebooks, some numbered and others left with no clear indication of their eventual location in the book. Throughout the pages, narrative contradiction and inconsistency are pervasive: the names of main characters often change suddenly and the same narrative episode can be found in multiple scenes, the details of which contradict each other. Proust constantly slips between third-person and first-person narration. The discontinuous shards of narrative that exist across these manuscript pages gesture toward a complete novel that will never exist, leaving Proust's incomplete experiment at the edges of narrative fulfillment, in which the continuities of time, character, and narrative itself exist in a state of perpetual rupture. Although Proust left no clear title for the manuscript, editors have named it after the protagonist: Jean Santeuil. (Christie 2013)

Jean Santeuil represents Proust's writing technique in process, standing as an early predecessor to *la Recherche* equally as it demonstrates an early attempt at Proust's ongoing experiment in writing time. The transmutable nature of written reality that Proust describes in *la Recherche* therefore figures into the changing and self-contradicting narrative of *Jean Santeuil*. Rather than tracking the linear maturation of its protagonist from infancy to adulthood, *Jean Santeuil* represents the constant splitting and shifting of the protagonist, as Proust confuses him with his friend Henri, as the narrative frame in

which his story is encapsulated constantly shifts and cracks, and as the events of his life are fragmented across contradictory versions of the same episodes. As Luc Fraisse writes:

Jean Santeuil is but an invertibrate work. It is made of pieces more than parts: the reaction of Marcel Arland in 1954 reflects a general impression: we enter into the period of unfinished fragments. Pierre Clarac thusly evokes the author of *Jean Santeuil*, if we can speak of an author on the topic of an abandoned draft: ‘At the whim of inspiration, as soon as it resuccitated in him moments of the past, he wrote a few pages, sometimes only a few lines. The fragments amassed thusly...this succession of independent pieces can astonish the reader.

Jean Santeuil n’est qu’une œuvre invertébrée. Elle est faite de morceaux plutôt que de parties’: la réaction de Marcel Arland en 1954 reflète une impression générale: nous entrons dans le temps des fragments inachevés. Pierre Clarac évoque ainsi l’auteur de *Jean Santeuil*, si l’on peut parler d’auteur à propos d’un brouillon abandonné: ‘Au gré de l’inspiration, à mesure que ressuscitaient en lui des moments du passé, il écrivait quelques pages, parfois seulement quelques lignes. Les fragments s’amassaient ainsi (...). Cette succession de morceaux indépendants pourra étonner le lecteur. (94)

Rather than concluding with the knowledge and experience of Jean’s early adulthood, the manuscripts result in pages of unsettled narrative fragments, disconnected shards of

Jean's life that shift between memories of his childhood, adolescence, and adulthood, memories which never resolve into a unified, coherent chronology.

Proust writes of these drafts: "shall I call this book a novel?" ("puis-je appeler ce livre un roman") Despite Proust's awareness of the incoherent state of his book, his writing experiment only exists as a failure to the extent that it is read as a print book in formation. Proust's experimental development of the *bildungsroman* does not solely consist of editing a book, but also in learning how to make a book that works like a film. *Jean Santeuil* thus shows Proust recreating the procedures of the magic lantern at the level of bibliography. Reading Proust as an editor, in both the bibliographic and cinematographic sense, opens a corollary procedural hermeneutic for interpreting *Jean Santeuil*'s fragmented structure. This reading of Proust as film editor is confirmed by Maurice Bardèche, who writes: "He wrote fragments, pieces more or less shorter than his book, which exist in his workshop as pieces of celluloid with which one will make the montage of a film" ("Il écrivait des fragments, des bouts plus ou moins courts que son roman, qui sont dans son atelier comme les bouts de celluloid avec lesquels on va faire le montage d'un film"; qtd. in Fraisse 296). Jean-Yves Tadié, editor of the Quarto Gallimard edition of la *Recherche*, concurs: "We can at the outset affirm that from his first book to his last, he proceeds always in the same fashion: by pieces, which he then assembles; it is the work of montage, as it is practiced in cinema" ("On peut d'abord affirmer que de son premier livre à son dernier, il rédige toujours de la même façon: par morceaux, qu'il assemble ensuite; c'est un travail de montage, tel qu'il se pratique au cinéma"; qtd. in Fraisse 291). This

filmic project runs throughout Proust's oeuvre. The attempt to simulate motion through the juxtaposition of moving elements recurs across *la Recherche*, including Marcel's multiple incomplete views of the Combray cathedral, his inability to distinguish Albertine's face from the moving mass of *la petite bande des jeunes filles*, and the constant motion of Albertine's beauty mark. Proust's compositional practice mirrors his aesthetic deployment of cubist and montage understandings of movement—it creates multiple, individual fragments, which are then combined to form a chronological sequence. Much as cubist practice gathered and assembled multiple frames to describe motion (a practice later extended through synthetic cubism, and most notably instantiated in Marcel Duchamp's *Nu descendant un escalier, No.2*) and the film reel interlinked individual images to produce a moving sequence, Proust's kaleidoscopic *cahiers* use the linkage and interpolation of individual fragments to generate narrative chronology. The breakages and ruptures of *Jean Santeuil* therefore reveal and expose the filmic structure of Proust's bibliographic magic lantern. *Jean Santeuil* is not a book; it is a film.

In addition to structuring the inconsistencies in character and sentence structure, Proust's kaleidoscopic composition forms a book composed of multiple narrative fragments or vignettes, loosely arranged into different periods of Jean's life. One such narrative sequence, composed of two contradictory fragments that describe two versions of the same sequence of events, reveals Proust's kaleidoscopic writing at work. The scene, itself an early instantiation of a scene in which Marcel and Albertine travel from Balbec by train in *la Recherche*, details Jean's trip to Penmarch on a stormy day. In one

version of the passage, Jean drives to Penmarch with his servants to observe the storm. The fragment concludes with Jean and his companions observing the storm from the beach at Penmarch. Immediately following this description, Proust begins the story over again, writing “Comme le vent devenait trop fort, ils laissèrent leur voiture à Pont-Labbé et prirent le petit chemin de fer qui va de Pont-Labbé à Penmarch.” (376) On the train, Jean encounters two women and a cyclist (who returns in a fragment elsewhere in the book). The fragment details Jean’s voyage by train, and ends with Jean’s impressions of the passengers as they disembark at Penmarch. Combined, these two fragments compose a branching narrative structure, one in which Jean travels to Penmarch by car and another in which he is forced to abandon the car to take the train. (This branching sequence is further complicated by the possibility that the two fragments could be decoupled from each other to form discrete narrative episodes, though the editors of print editions of the novel keep them linked, and the shared details between both fragments suggests Proust intended to combine them). Different spatial arrangements of these two fragments produce different spatial and temporal permutations of the same episode, a task of cinematographic editing that André Maurois and Bernard de Fallois undertake in their 1952 edition of the book, which excises a paragraph describing Jean’s arrival at Penmarch by car and inserts the train fragment in-between the fragments that describe Jean embarking for Penmarch and Jean observing the storm with his companions on the beach. As a recombinant textual object, or bibliographic magic lantern, *Jean Santeuil* manifests Proust’s argument, articulated thematically throughout *la Recherche*, that personal and political realities exist in versioned textual accounts.

Jean Santeuil and *la Recherche* stand as different moments in the artifactual history of Proust's ongoing writing experiment; to the extent that each book represents Proust's account to write a given *temps* (period of time), they also represent different bibliographic and historical moments. The changing status of the fragment across both books therefore suggests that each book's writing corresponds to different historical inflections of Proust's engagement with the politics of bibliographic form. *La Recherche* and *Jean Santeuil* can be read as bibliographic concretizations of the two distinct *temps* they describe: twentieth and late nineteenth-century French life. Luc Fraisse writes:

A fragment is a portable element—as, one remembers, a character in a salon was interchangeable with other characters in other salons. When the textual fragment is furthermore an essential piece, it becomes a sort of silhouette of the complete work, and the overarching question is from then on to know beside which with fragment it works to appose this signature that summarizes the entire work. Fragment of text and fragment of universe entirely superimpose each other here: we remark that this superposition resulted in the failure of *Jean Santeuil*, as one now sees that it models the proliferation of *la Recherche*, at once a text to write and a world to animate.

Un fragment est un élément portatif—comme était, on s'en souvient; un personnage dans un salon interchangeable avec d'autres personnages dans d'autres salons. Quand le fragment de texte est de plus un morceau capital, il devient une sorte de silhouette de l'œuvre complète, et la grande

question est dès lors de savoir à côté de quel épisode il convient d'apposer cette signature qui résume l'ouvrage entier. Fragment de texte et fragment d'univers se superposent totalement ici: nous remarquons que de cette superposition résultait l'échec de *Jean Santeuil*, comme on voit qu'elle modèle maintenant la prolifération de la *Recherche*, à la fois texte à écrire et monde à animer. (293)

Whereas la *Recherche* writes a time characterized by rapid historical and social change, *Jean Santeuil* writes a time structured through vast discrepancies in character, history, and political perspective. By reading *Jean Santeuil* through its mechanics of production, as a bibliographic magic lantern rather than a print book in formation, a politics of its fractured form emerges. In an editorial prolepsis to the recombinant text of la *Recherche*, *Jean Santeuil* embodies a writerly moment in which political dissonance is instantiated in conflicting textual narratives that occupy the same documentary space. This fractured and self-contradictory form, far from being ahistorical or decontextualized, characterizes the sensational print journalism that dominated the period during which Proust wrote *Jean Santeuil*, and which Proust describes explicitly in the book. Through the filmic composition of *Jean Santeuil*, Proust writes the documentary politics of 1890s France, as it engaged the upheavals of the Dreyfus Affair.

***Jean Santeuil* and the trials of textual composition**

Jean Santeuil is a book that contradicts itself at every turn, offering the reader a bibliographic puzzle in which multiple incompatible chronologies occupy the same textual space. With no title, no discernable order, frequent lapses in the names of

characters and locales, and sections and sentences that either stop midway or trailed off into incoherence, this manuscript, abandoned by Proust at the age of twenty-eight, appears as a perfect encapsulation as its opening epigraph: “Shall I call this book a novel?” (“Puis-je appeler ce livre un roman?”) Bringing that sentence to fruition is a task that so far has been taken up by three editors—from Bernard de Fallois’s initial 1952 edition, to the second edition by Pierre Clarac, which went back to the manuscript and added a meticulous series of grammatical emendations and editorial variants, to a third edition which, under the editorial oversight of Jean-Yves Tadié, reorganized the text of the previous edition and reduced its critical apparatus.⁹ The editorial work taken to bring this unfinished novelistic experiment to public light therefore represents scholarly engagements with both the form and the process of Proust’s filmic composition. In particular, the 1971 scholarly edition of the book, which scrupulously identifies (and suggests emendations that might stitch together) the unfinished connections between Proust’s fragments reveals the fractured filmic structure of *Jean Santeuil*. In his preface to the first edition, André Maurois writes: “Is our admiration for a painter’s works a reason for neglecting the sketches he had previously refused to show? They have a completely different beauty, more overlooked, more bold, sometimes also more moving” (“Notre admiration pour les tableaux d’un peintre est-elle une raison pour dédaigner les esquisses qu’il refusa jadis de montrer? Elles ont une beauté toute différente, plus négligée, plus hardie, parfois aussi plus émouvante”; De Fallois 9).¹⁰ It is in the revisional nature of the sketch, the textual lack of fulfillment—the unfinished leitmotifs, the incomplete sentences, the constant lapses in character and location names, in short, the missing correspondences—that the overlooked beauty of *Jean Santeuil* is to be found.

These unfinished connections inhere not only in the process of writing *Jean Santeuil*, but also in its *procès* (its “trials”). Unlike Proust’s later novel, a completed product which reproduced the major political scandal of Proust’s time—The Dreyfus Affair—after its resolution, the textual composition of *Jean Santeuil* occurred while the trials of the Affair were still underway.

There are only two books which described the Dreyfus Affair while it was actually taking place; one of them is *Jean Santeuil*.¹¹ As a result of being written while the scandal was still underway, before the *procès* of the Affair had reached their conclusion, the events of the Affair occur in a space where the question of whether it was Alfred Dreyfus or Ferdinand Walsin-Esterházy who leaked secret military documents to the German forces was yet to be determined. The political scandal, which divided French society between 1894 and 1899, began with the retrieval of a letter from the German Embassy revealing the existence of a spy in the French military. In a political environment dominated by suspicion and anti-Semitism, Alfred Dreyfus—a major in the French army of Jewish origins—was indicted. After being sent indefinitely to *L’île du Diable*, Dreyfus gained an increasing number of supporters who aimed to prove his innocence. This culminated in the testimony of Colonel Georges Picquart, the chief of the secret service, who discovered a telegram, or *petit bleu*, addressed to the German military attaché written in the hand of Ferdinand Walsin-Esterházy. After a brief trial, Esterházy was acquitted; shortly thereafter Émile Zola wrote his famous article “J’accuse...!” denouncing the government’s verdict. At this point, the scandal rose to dominate the social and political environment of France, dividing its people into opposed camps of *dreyfusards* (those who supported Dreyfus’s innocence) and *anti-dreyfusards* (those who

opposed it).¹² It was in the midst of this political environment, before the final decision to acquit Dreyfus that was made in Rennes in 1899, that *Jean Santeuil* was written. Rather than producing a remembrance of the Affair which recreated the uncertainties surrounding Dreyfus's innocence, as he does with *la Recherche*, Proust grappled with the actual hearings of the Affair while he was writing about them in *Jean Santeuil*.

The trials of the Dreyfus Affair thus play a much larger role in the plot of Proust's earlier book. In a passage describing the controversial testimony of Colonel Picquart, Proust writes: "while seeing him thus circulating between the groups which, at times hid him completely, one could take him for a good officer sure of his future and of his testimony...or [for] a prisoner who one released to expose him to a sort of torture" ("en le voyant ainsi circulant entre les groupes qui par moments le cachaient complètement, on pouvait le tenir pour un bon officier sûr de son avenir et de son fait...ou [pour] un prisonnier qu'on laissait sortir pour l'exposer à une sorte de torture"; Clarac 635). Here, Picquart's dubious status exposes the relationship between political sandal and narrative contradiction, since the dissonant views of Picquart's testimony align the unsettled details of the Affair into different narrative trajectories: one in which Picquart's truthful testimony brings integrity and political gain to the Colonel, and another in which Picquart's participation in espionage makes him a deplorable political dissident. As he describes the changes in Picquart's position as one moves between different political groups, and different views of his story, Proust begins to explain the situation in somewhat more self-reflexive terms:

What can one do? It is only with our head that we can think, and we exhaust it with the years, we give it bit by bit the form of what we have

placed there. Certainly, it should not be said that we do nothing more than turn all the time in the same circle: in the same circle we can turn an infinity of different things.

Qu'y peut-on faire? C'est avec notre tête seulement que nous pouvons penser, et nous la fatiguons avec les années, nous lui donnons peu à peu la forme de ce que nous y avons mis. Certes, il ne faut pas dire que nous ne faisons [que] tourner tout le temps dans le même cercle: dans le même cercle nous pouvons faire tourner une infinité des choses différentes.

(Clarac 642-643)

It is in this process of turning details around into different potential configurations, of constantly revisiting and reworking the same unsettled situation over a period of four years as new elements are brought to bear on the story, that the political space of the trial becomes emblematic of the textual space of the manuscript. In the same way that the different political groups who deliberated in the Dreyfus Affair constantly re-combined and re-worked the developing details of the espionage into different narrative trajectories over a span of four years, Proust was constantly re-organizing—or turning around—the details of this manuscript as he developed them over this same period of time, a procedure later incorporated into the language of la *Recherche* through the trope of the kaleidoscope. In this way, the political conflict that Proust uses to describe the competing narratives of the Dreyfus Affair reflects the narrative and textual contradictions of the manuscript in which he reproduces them. By the time Proust finally abandoned his

manuscript in 1899, neither the *procès* of the Dreyfus Affair nor the process of composing *Jean Santeuil* had reached completion.

The trials of textual composition in the book thus recreate the political disagreement of a courtroom, where the disputed details of an event change depending on one's editorial stance or perspective. In addition to the Dreyfus Affair, Proust fictionalizes the events of the Panama Affair—a bribe scandal that occurred just three years before he began work on the manuscript—in a series of fragments grouped in the section “Le Scandale Marie” (“The Marie Scandal”).¹³ Much like Alfred Dreyfus, Charles Marie—a prominent and respected politician (whose wife, like Dreyfus, also happens to be of Jewish descent)—becomes ruined by his implication in a political corruption scandal. Although initially seen as a paragon of moral righteousness, Marie's reputation is cast into doubt when his friend Duclin reveals Marie's involvement with corrupt bankers and the theft of twenty-five thousand francs. Throughout the investigation into Marie's corruption, Proust's characters become polarized along conflicting views of Marie's character, either seeing him as unfortunately good-hearted or ethically corrupt. Marie's wife, who dies before her husband's corruption is exposed, is described as having a strong faith in her husband's good character. Perhaps anticipating the events which are to unfold after her death, Mme Marie makes a dying request that Mme Santeuil maintain the friendship between their husbands, saying of Marie: “If he ever did any harm, it could not have been but by the force of his good heart for those who don't always deserve it” (“S'il faisait jamais quelque mal, ce ne pourrait être que par entraînement de son bon cœur pour ceux qui ne me méritant pas toujours”; Clarac 581). However, the end of Mme Marie's explanation of her husband's good nature toward

“ceux qui le méritent pas toujours” has been emended by the editors from “ceux qui qui le méritent toujours pas.” The original sentence that Proust wrote was thus the following: “If he ever did any harm, it could not have been but by the force of his good heart for those still don’t deserve it” (“S’il faisait jamais quelque mal, ce ne pourrait être que par entraînement de son bon cœur pour ceux qui ne me méritant toujours pas”; Clarac 1055).¹⁴ By emending Mme Marie’s final words to be more consistent with the previous expressions of her husband’s moral righteousness, the editors locate an instance of dissonance between Proust’s grammatical choice and Mme Marie’s most possible meaning. In reversing the original word order, they reject the possibility that in her final moments, Mme Marie expresses a different view of her husband’s morality, one that sees him to favor “those who still don’t deserve it” (“ceux qui ne me méritant toujours pas”). These conflicting views of her husband’s moral character, one which sees his involvement with corrupt bankers as symptomatic of his unfortunate good intentions, and another which sees it as demonstrating his preference for people who remain morally suspect, emerge from the dissonance between Proust’s grammatical construction and Marie’s previous expressions of opinion. Rather than being inconsistent however, this tension is actually more consistent with the questioning of Marie’s opinion of her husband that occurs on the very next page, in a long passage where Proust writes: “We can simultaneously doubt the same things in which we believe, even in the same moment... Perhaps the moral distinction of her husband was thus for Marie an object of both belief and doubt” (“Nous pouvons à la fois douter des mêmes choses auxquelles nous croyons, et dans le moment même... Peut-être la valeur morale de son mari fut-elle ainsi pour Mme Marie objet à la fois de foi et de doute”; Clarac 583). The contradiction

therefore, between Mme Marie's expressed views of her husband and her word sequence while describing him in her final moments, can be seen as symptomatic of a deeper uncertainty about her husband's true moral nature (in this way, Proust's grammatical uncertainties surrounding Marie parallel those used to characterize Albertine in *la Recherche*). It is this very uncertainty that grows throughout the section, culminating in the conflicting views of Marie that clash in the political drama of his trial.

As the trail begins to take shape, this same linkage between grammatical and social uncertainties about Marie's character recurs. In the fragment "Marie Inculpé" ("Marie Indicted"), Proust describes Marie's prolific altruism in a sentence that explains how stories of his positive influence circulated among the families of his department. The sentence reads:

He is not recorded in any written account, but in this story of the families of his department, who thanks to him saw their setbacks become manageable and had more happiness than they had known until then—in so many families...

Il n'est consigné dans aucune histoire écrite, mais dans cette histoire des familles de son département, qui grâce à lui virent leur revers rendus supportables et eurent plus de bonheur qu'elles n'en avaient jamais connu jusque-là—dans tant de familles... (Clarac 587)

However, this expression of the good Marie has done for the families of his department is the result of an editorial emendation of Proust's incoherent grammar. The words "virent" ("they saw") and "eurent" ("they had") have been emended to the third-person plural of

the *passé simple*; the words were originally written by Proust in the third-person singular of the *passé simple*, thus reading “vit” (“he, she, it saw”) and “eut” (“he, she, it had”). Similarly, the feminine third-person plural article “elles” (“they”) was originally written by Proust in the masculine form “ils,” which conflicts with the feminine noun “les familles,” hence the emendation. Before these editorial interventions, Proust’s sentence therefore reads:

He is not recorded in any written account, but in this story of the families of his department, which thanks to him saw its setbacks become manageable and had more happiness than they had known until then—in so many families...

Il n’est consigné dans aucune histoire écrite, mais dans cette histoire des familles de son département, qui grâce à lui vit ses revers rendus supportables et eut plus de bonheur qu’ils n’en avaient jamais connu jusque-là—dans tant de familles...(Clarac 1056)¹⁵

As Proust originally wrote the sentence, the words “vit” and “eut” can be read as referring to the singular noun “cette histoire” (“this story”) rather than the plural noun “les familles” (“the families”), and the masculine article “ils” conflicts with both of the nouns, which are feminine. In Proust’s unrevised sentence, it is thus less clear whether it is the families of Marie’s department which see fewer setbacks and more happiness, or the story of these families’ prosperity which sees fewer setbacks and more happiness. The inconsistent grammar of Proust’s original sentence allows it to be read both ways, and although the interpretation provided by the editors is more coherent and most consistent

with Jean's belief in Marie's moral righteousness, the grammatical lack of agreement in Proust's original sentence reflects the political lack of agreement on whether Marie is a social altruist or a political opportunist. The incoherence of Proust's unrevised sentence allows for two possibilities of narrative completion: one in which the sentence describes Marie's positive social impact on the families of his department, and another in which the sentence describes Marie's political gain from the circulating story of his altruism. These clashing opinions surrounding Marie's indictment are reflected in the grammatical contradictions of Proust's incomplete sentences, sentences which recreate, at both the textual and narrative level, the political conflict surrounding the book's historical moment.

The controversies of political drama thus shape many of the narrative events of the book, in which the disputed views of an event polarize Proust's characters into conflicting groups. These controversies structure not only Proust's recreations of historical scandals, but also the fictional dramas that divide his social world. One such instance of Proust's fictionalized political drama occurs at a party hosted by Mme Marmet, in which Jean and M. Saylor have a disagreement that escalates into a duel, dividing Proust's characters into those who are willing to serve as Jean's witnesses, those who refuse his requests, and those who side with Saylor (seeing Jean as guilty of the social affront). This is the narrative that occurs if one reads "Jean Accusé de Tricherie" ("Jean Accused of Cheating"). However, if one reads the events as told in "Le Baron Scipion" ("The Baron Scipion"), the conflict between Jean and Saylor does not take place at Mme Marmet's house, but instead occurs at the theater; also, Jean's witnesses are changed from the Marquis de Trailles and the Vicomte de Boisieux to the Duc de

Réveillon and the Général de Beauvoil. One's view of the narrative details of the duel therefore changes depending on her or his position in the text, as do the political alignments that divide Proust's characters along conflicting interpretations of the affront.

As seen earlier, these dissonant narrative positions extend even to the level of conflicting grammatical structures and, in this case, individual word choice. During the fragment in which Jean and Saylor's duel becomes initiated at Mme Marmet's party, Proust gives an explanation of Jean's social comportment that reads: "Jean laughed, since the airs of impertinence were one of the sacred forms of his politeness, of his humor and of his authority" ("Jean rit, car les airs d'impertinence étaient une des formes consacrées de sa politesse, de sa drôlerie et de son autorité"; Clarac 686). However, the editors suggest emending the article "sa" ("his") to the similarly-sounding "la" ("the"), which would make the description refer to Mme Marmet rather than Jean. The suggested emendations therefore read: "Jean laughed, since the airs of impertinence were one of the sacred forms of the politeness, of the humor and of the authority of Mme Marmet" ("Jean rit, car les airs d'impertinence étaient une des formes consacrées de la politesse, de la drôlerie et de l'autorité de Mme Marmet"; Clarac 1070).¹⁶ Changing the sentence from describing Jean to Mme Marmet makes more sense within the immediate context of the sentence. Jean's laughter is in response to an argument between Mme Marmet and M. Saylor over which of them should enjoy Jean's company during the party; it immediately follows the argument made by Mme Marmet against M. Saylor, when she says: "You are kidnapping my most beautiful young protégé and all the women are alone...that is not done in my home. Have you ever seen such a thing?" ("Vous m'enlevez mon plus beau jeune premier et toutes les femmes sont seules...venez, on ne fait pas ça chez moi. Avez-

vous jamais vu cela?"; Clarac 1070). By reading Jean's laughter as an acknowledgement of Mme Marmet's forms of politeness, humor, and authority the sentence implicates Jean's duel with Saylor in the social competition between Saylor and Marmet. If Jean's laughter is in response to Mme Marmet's question "avez-vous jamais vu cela?" ("have you ever seen such a thing?"), and acts as an acknowledgement of Mme Marmet's humor and authority, then Saylor's challenge to face Jean in a duel, which occurs later in the same paragraph, can be read as a response to Jean's perceived alliance with Mme Marmet.

However, Proust's original sentence carries different implications for Jean's political alliances, since Jean and Marmet become social foes over the course of the book. By reading Jean's laughter as an assertion of his own forms of politeness, humor, and authority, his response to Mme Marmet's question thus becomes a challenge to her authority, rather than an act that confirms it. The original sentence therefore locates Jean's laughter as an initial form of conflict between Jean and Mme Marmet, which also becomes implicated in the rivalry between Mme Marmet and M. Saylor. This grammatical shift from "l'autorité de Mme Marmet" to "son autorité" therefore shifts the political significance of Jean's duel with Saylor. To complicate matters even further, if one reads the encounter between Jean and Saylor as told in "Le Baron Scipion," the entire scene takes place at the theater, where Mme Marmet is not even present, and Jean's conflicts with Mme Marmet and M. Saylor are completely unrelated. These textual contradictions, occurring both on the level of grammatical structure and narrative composition, thus directly shape the political conflicts surrounding Jean and Saylor's duel. Rather than resolving into larger aesthetic unities—reflecting and echoing each other like the passages of *la Recherche*—these clashing textual perspectives remain

incomplete, suggesting contradictory possibilities of narrative resolution, just like the unresolved political scandals around which they were written. Proust writes the Dreyfus Affair.

The political conflicts surrounding Proust's earlier work, recreated in the unfinished and largely unread book that precedes *À La Recherche du Temps Perdu*, inhere in the very fragments of narrative and clashes of grammar that Proust left unresolved. To dismiss the textual gaps and breaks in this earlier text, and to dismiss the text itself, as incoherent and incomplete, is thus to overlook a key aspect of Proust's modernist technique. Rather than being extraneous precursors to the high aesthetic unity of his later work, the textual contradictions of *Jean Santeuil* expose Proust's engagement with the political conflicts of late nineteenth-century France. Reading the grammatical and narrative contradictions of Proust's earlier book reveals his writing as a vehicle for exploring and engaging, rather than resolving and reproducing, its historical and political moment. This view of the trials of textual composition uncovers Proust's writing process as it transmutes the documentary politics of its *temps* into the bibliographic structure of a book. Rewinding Proust's magic lantern, from *la Recherche* to *Jean Santeuil*, shows how Proust's physical documents are cognate to the politics of media production in their historical moments. Proust's filmic theory of the individual as a fractured self-portrait, composed of a series of static moods and moments, reifies in writing the politics of sensation, deceit, and false testimony during turn of the century France. Such versioned constructions of character reemerge in the writing of Samuel Beckett who, inspired by Proust's kaleidoscopic method, writes a reality in which the politics of wartime communication inscribe the individual as a cipher.

 Notes

¹ For more, see “Marcel” in Germain (1953) and Landy (2004).

² Proust writes: “If the lantern were moved I could still distinguish Golo's horse advancing across the window-curtains, swelling out with their curves and diving into their folds. The body of Golo himself, being of the same supernatural substance as his steed's, overcame all material obstacles everything that seemed to bar his way by taking each as it might be a skeleton and embodying it in himself: the door-handle, for instance, over which, adapting itself at once, would float invincibly his red cloak or his pale face, never losing its nobility or its melancholy, never shewing any sign of trouble at such a transubstantiation” (“Si on bougeait la lanterne, je distinguais le cheval de Golo qui continuait à s'avancer sur les rideaux de la fenêtre, se bombant de leurs plis, descendant dans leurs fentes. Le corps de Golo lui-même, d'une essence aussi surnaturelle que celui de sa monture, s'arrangeait de tout obstacle matériel, de tout objet gênant qu'il rencontrait en le prenant comme ossature et en se le rendant intérieur, fût-ce le bouton de la porte sur lequel s'adaptait aussitôt et surnageait invinciblement sa robe rouge ou sa figure pâle toujours aussi noble et aussi mélancolique, mais qui ne laissait paraître aucun trouble de cette transvertébration”; 2, Swann).

³ As documented by Jeffrey Drouin's *Ecclesiastical Proust Archive*, cathedrals play a central role in Proust's *Recherche*. Proust explicitly ties the material features of the Combray cathedral to its history, writing: “Cette église a été détruite par les Français et par les Anglais parce qu'elle servait d'observatoire aux Allemands. Tout ce mélange d'histoire survivante et d'art, qui était la France, se détruit, et ce n'est pas fini. Et, bien entendu, je n'ai pas le ridicule de comparer, pour des raisons de famille, la destruction de l'église de Combray à celle de la cathédrale de Reims, qui était comme le miracle d'une cathédrale gothique retrouvant naturellement la pureté de la statuaire antique, ou de celle d'Amiens” (143, Ombre) Elsewhere, Proust fuses these two elements (material design and history) to argue for the Combray cathedral bell tower as an artifact that concretizes its own identity, in a manner resembling Proust's own production of *la Recherche*: “Et sans doute, toute partie de l'église qu'on apercevait la distinguait de tout autre édifice par une sorte de pensée qui lui était infuse, mais c'était dans son clocher qu'elle semblait prendre conscience d'elle-même, affirmer une existence individuelle et responsable. C'était lui qui parlait pour elle.” (14, Swann)

⁴ Marcel is particularly suspicious of Albertine's relationship with Andrée, which he often attempts to *surveiller* by means of telephone: “Et peut-on savoir pourquoi vous avez téléphoné à Andrée?—Pour lui demander si cela ne la contrarierait pas que je me joigne à vous demain et que j'aie ainsi faire aux Verdurin la visite que je leur promets depuis la Raspelière.—Comme vous voudrez. Mais je vous préviens qu'il y a un brouillard atroce ce soir et qu'il y en aura sûrement encore demain. Je vous dis cela parce que je ne voudrais pas que cela vous fasse mal.” (349, prisonniere)

⁵ Technologies of communication also register Marcel's grief following the deaths of his grandmother and of Albertine. Following his grandmother's passing, Marcel knocks against his bedroom wall, knowing that his grandmother will never again respond (the distance between them is now uncrossable): "Je savais que je pourrais frapper maintenant, même plus fort, que rien ne pourrait plus la réveiller, que je n'entendais aucune réponse, que ma grand'mère ne viendrait plus. Et je ne demandais rien de plus à Dieu, s'il existe un paradis, que d'y pouvoir frapper contre cette cloison les trois petits coups que ma grand'mère reconnaîtrait entre mille, et auxquels elle répondrait par ces autres coups qui voulaient dire: « Ne t'agite pas, petite souris, je comprends que tu es impatient, mais je vais venir », et qu'il me laissât rester avec elle toute l'éternité, qui ne serait pas trop longue pour nous deux." (287, S&G) Albertine's death is similarly announced by telegram, particularly heightening the relationship between technological communication and unknowable aspects of another's lived experience: "Je laissai toute fierté vis-à-vis d'Albertine, je lui envoyai un télégramme désespéré lui demandant de revenir à n'importe quelles conditions, qu'elle ferait tout ce qu'elle voudrait, que je demandais seulement à l'embrasser une minute trois fois par semaine avant qu'elle se couche. Et elle eût dit une fois seulement, que j'eusse accepté une fois. Elle ne revint jamais. Mon télégramme venait de partir que j'en reçus un. Il était de Mme Bontemps. Le monde n'est pas créé une fois pour toutes pour chacun de nous. Il s'y ajoute au cours de la vie des choses que nous ne soupçonnions pas. Ah ! ce ne fut pas la suppression de la souffrance que produisirent. en moi les deux premières lignes du télégramme: « Mon pauvre ami, notre petite Albertine n'est plus, pardonnez-moi de vous dire cette chose affreuse, vous qui l'aimiez tant. Elle a été jetée par son cheval contre un arbre pendant une promenade. Tous nos efforts n'ont pu la ranimer. Que ne suis-je morte à sa place." (399, Albertine Disparue) Despite his speculation on the circumstances of Albertine's departure and her death, Marcel will never be able to extract the full course of events from Mme Bontemps's message.

⁶ Proust explicitly ties his changing perceptions of social life to changes in the technologies of his day, writing: "Et j'y descendais sans presque penser combien il était extraordinaire que chez cette mystérieuse Mme de Guermantes de mon enfance j'allasse uniquement afin d'user d'elle pour une simple commodité pratique, comme on fait du téléphone, instrument surnaturel devant les miracles duquel on s'émerveillait jadis, et dont on se sert maintenant sans même y penser, pour faire venir son tailleur ou commander une glace." (339, Prisonniere)

⁷ View Pierrazo and André's genetic prototype at http://research.cch.kcl.ac.uk/proust_prototype/index.html.

⁸ This section also appears in "Proust at the Edges of Modernity." (Christie 2013)

⁹ De Fallois made his editorial changes to the manuscript without listing them in an apparatus. The task of examining his editorial interventions in Proust's text is one that still remains. The second edition of *Jean Santeuil*, edited by Pierre Clarac (with the help of André Ferré, before his death, and the editorial oversight of Yves Sandre for *Les*

Plaisirs et les Jours) is, at this point, the only one to include an apparatus with a list of textual variants. The places where I look at the textual details of the book thus draw specifically from the 1971 edition, since it is the only scholarly edition of the book that currently exists. The third edition, which reproduces the text of the second edition, excises almost the entirety of the textual apparatus, making it what Fredson Bowers calls a practical edition. For more information on the editorial interventions made by Jean-Yves Tadié in the text established by Clarac and Sandre, see Tadié 33.

¹⁰ All translations provided from the French are my own.

¹¹ The other book is Anatole France's *L'Histoire Contemporaine*. (France)

¹² For further information on the Dreyfus Affair, see "Histoire."

¹³ In "the Art of Distinction: Proust and the Dreyfus Affair," Lynn Wilkinson writes: "In his biography of Proust, George Painter...argues convincingly that the Marie Scandal evokes the Panama Affair of 1892, in which several prominent statesmen were accused of accepting bribes from the Panama Canal Company. 'The politicians implicated in the scandal were, unfortunately,' he comments, 'the same who in 1889 had opposed and destroyed the nationalist and protofascist movement of General Boulanger. Panama was the second round in the struggle between right and left, army and anti-militarists, anti-Semites and Jews, Catholics and anti-clericals, royalists and republicans, nobility and bourgeois, of which the Dreyfus Case was to be the third'" (998).

¹⁴ The apparatus reads: « Ms: 'toujours pas'* ».

¹⁵ The apparatus reads: Ms. « vit ses revers... et eut plus de bonheur qu'ils*».

¹⁶ The apparatus reads: « Entendez: 'la politesse' etc. de Mme Marmet ».

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Decrypting Beckett's Code: A Trilogy of memex manuscripts

Beckett's Trilogy abounds with instances of characters lost in translation—Molloy's uncertainty of how he met Lousse; Moran's difficulty remembering the instructions of Gaber and communicating instructions to his son; Malone's attempt to communicate with his caretaker; and many other instances in which acts of communication, and the mechanisms through which they operate, deform and distort the identities of its participants. Beckett's characters attempt to translate others at the same time as they are themselves linguistically and bibliographically translated: Beckett translated the linguistic content of the trilogy from French to English and inscriptively translates his characters across the novels. Moran, with knee troubles and crutches, almost resembles Molloy at the end of the novel (but the congruence is imperfect); Molloy graphically translates the letters of Lousse's name from "Mrs. Loy" to "Lousse"; Beckett leaves Sapo's new name blank (writing only an "M") in his manuscript and only later fills in the name as Macmann (Van Hulle 190). The material production of Beckett's writing instantiates the errors in communication that exist in the novel: Moran's statement that "there were three, no, four Molloys" is not mere metaphor—across the various instantiations of the Trilogy (in French and English and in the novels themselves), the character Molloy is manifest through variant configurations of text, image, and speech that may or may not stand-in for the same thing. Much like the operations of morse code, through which near-identical instances of events traversed linguistic and geographic divides during World War II, the events of Beckett's Trilogies exist in divergent narrative elements whose indexical categorization and arrangement

resists full coherence. Rather than being lost in translation, Beckett's writing following World War II is more precisely a translation of loss, a record of encoded messages that (perhaps deliberately) distort and deform the reality they claim to document.

Across these instances, the act of translation operates through two related procedures, one linguistic and the other bibliographic. As this chapter argues, these procedures are fundamental to the medial ecology in which Beckett wrote. Linguistic translation was a key component of Ally cooperation in Western Europe and also an act Beckett undertook while translating his novels from French into English. Bibliographic translation (physically reordering signifying elements on a page) was undertaken through codemaking and codebreaking procedures for authoring personal correspondence, radio broadcasts, and spy communication. Deploying the same alphabetic rearrangement techniques described in the Trilogy, wartime encoding and encipherment relied on indexical relation and the reordering of letters, respectively:

In a code, words or numbers are substituted for plain language—for example, 'blue' could mean north, '12' could mean an advancing army, 'rainbow' could mean 'this Friday'—and no one can know what these represent unless they have been let into the secret, or have gained access to the necessary code books. Ciphers, on the other hand, involve the repositioning of letters as a means of hiding a message, and the systems by which this is done can be worked out by various means. Indeed for those with the requisite ability, to pit themselves against a difficult one can be an enjoyable challenge. (28)

Such codes and ciphers are deployed throughout the pages of Beckett's Trilogy, as both objects of narrative description and as bibliographic procedures for producing the words, letters, and paragraphs that form and deform communications between Beckett's characters. My use of the terms "translation" and "anagram" throughout this chapter refers at once to both procedures, deeply intertwined in Beckett's theoretical and practical production of the Trilogy. Such procedures further shape the media technologies in use at the time of Beckett's writing, and which directly inform Beckett's manuscript production techniques (specifically the use of microfilm to pass secret messages over wireless communication systems, undertaken by Beckett himself during the 1940s). Deploying the anagrammatic, translational, and indexical structures of early digital media as procedures for literary production, Beckett writes through the apparatuses of early digital communication to author the Trilogy as an index. Reading the Trilogy as early computational media, this chapter unscrambles, decodes, and decrypts Beckett's enciphered and encoded language, recovering it as a dynamic textual system that reproduces the mechanics of digital communications technology through bibliography.

The mechanics of signal loss and communication breakdown run throughout Beckett's trilogy, instantiated across thematic, linguistic, and bibliographic registers. Beckett writes one such instance through an episode that translates the physical taps of a morse code operator into Molloy's knocks on his mother's skull, in so doing translating or encoding verbal messages. Unable to communicate with his mother using language, Molloy instead develops a shared code through which they communicate, a code he communicates to his mother by hitting her on the head:

I got into communication with her by knocking on her skull. One knock meant yes, two no, three I don't know, four money, five goodbye. I was hard put to ram this code into her ruined and frantic understanding, but I did it, in the end. That she should confuse yes, no, I don't know and goodbye, was all the same to me, I confused them myself. . . . For she seemed to have lost, if not absolutely all notions of menstruation, at least the faculty of counting beyond two. It was too far for her, yes, the distance was too great, from one to four. By the time she came to the fourth knock she imagined she was only at the second, the first two having been erased from her memory as completely as if they had never been felt, though I don't quite see how something never fully can be erased from memory, and yet it is a common occurrence. She must have thought I was saying no to her all the time, whereas nothing was further from my purpose. (18)

Molloy goes on to describe how he refactored his code by including different varieties of hitting—including a knock of his index knuckle and a thump of his fist—to resolve errors in communication. While this means of communication bears similarities to morse code—itsself an encoded communication system frequently used during the novel's period of gestation and publication—it more immediately resembles Marcel Proust's knock-based communication system with his grandmother. As Nicholas Zurbrugg notes: “Molloy's slightly gentler system of communicating with his aged mother . . . subverts Marcel's cherished description of the way in which his ‘three little taps’ allow him to communicate with his grandmother at Balbec.” (262) Far from being coincidence or passing allusion, Proustian mechanisms of mediated communication play a significant

role in Beckett's Trilogy. Beckett translated Proust, publishing a 1931 literary interpretation of Proust's aesthetic theory and practice entitled *Proust*. Beckett's theoretical writing on Proust cements the allusions made throughout the trilogy in an intellectual history of literary and aesthetic experimentation. Beckett himself unpacks the role of knocking in the work, writing:

He knocks, and she comes again to him. But that night and for many nights he suffered. That suffering he interprets as the obscure, organic, humble refusal on the part of those elements that represented all that was best in his life to accept the possibility of a formula in which they would have no part. This reluctance to die, this long and desperate and daily resistance before the perpetual exfoliation of personality, explains also his horror at the idea of ever living without Gilberte Swann, of ever losing his parents, at the idea of his own death. (13)

For Beckett's Proust, the crisis of proximity that structures Marcel's relationships with women is simultaneously a crisis of self, or of personal narrative. The task of arranging the elements of a story such that they produce a coherent account of the other therefore undergirds the mechanisms by which Proust and Molloy alike relieve their suffering, mechanisms that replace linguistic or face-to-face communication with knocking. More than subverting Marcel's communication system with his grandmother, Beckett's skull-based variation extends that system to its limit: instead of performing the simple call-and-response function of Marcel's three knocks (to which his grandmother always correctly responds), Molloy's knocks rarely result in a clearly communicated and reciprocated message. In this way, the misprision of Molloy's knocks stands in synechdochic relation

to the misprision of Beckett's characters: just as Molloy's mother mistakes or displaces individual elements in a sequence of knocks, so too do Beckett's implied authors displace and misread (or miswrite) character names, as the letters and sounds of "Mrs. Loy" and (mis)translated to "Lousse," Sapo is translated to Macmann, and so on. In such fashion, Beckett's writing linguistically deforms Proust's argument that the individual is a series of successive elements by converting the individual's name (and identity) into an anagrammatic cipher that can be reordered and rearranged. Beckett extends Proust's kaleidoscope to its narrative limit, authoring narrative situations in which contradictory, conflicting, and nonsensical narratives shape a shared, indecipherable story.

Rather than being the analog trace of a material individual, Beckett's mediated experiences of the other serve as fully malleable constructs, constructs which cannot be traced back to a single or stable source. Whereas Marcel might mistake the wrong grandmother for his own over the telephone in *la Recherche*, Beckett authors a Trilogy as if Marcel were to persist in the misprision of one character for another until it is no longer clear who is whom. Such Beckettian deconstructions of Proustian form run throughout the Trilogy:

The volumes of Beckett's trilogy, and *Molloy* in particular, abound with

this kind of more or less self-conscious derision of Proustian ideals.

Whereas Marcel innocently celebrates the beauty of hawthorns, the splendor of Françoise's cuisine, the originality of Vinteuil's music and the charm of cathedrals, Molloy cynically comments: 'Unfortunately I don't like the smell of hawthorn' and 'Unfortunately I don't much care for good things to eat', while Moran pauses to make such jaded asides as: 'If there

is one thing gets on my nerves it is music' and 'Passing the church, something made me stop. I looked at the door, baroque, very fine. I found it hideous. (Zurbrugg 263)

While these thematic subversions of Proustian values appear throughout the Trilogy, complex extensions and inversions of Proust's aesthetic theory—particularly as it relates to technologically-mediated communication with women—run still deeper. Through Sapó, Beckett satirizes Marcel's kaleidoscopic, cubist vision of *la petite bande des jeunes filles*. Whereas the young Marcel cannot distinguish Albertine's face from the swirling visage of her companions, Sapó struggles to distinguish his favorite hen from a group of its own *petite bande*:

It was a grey hen, perhaps the grey hen. Sapó got to know her well and, it seemed to him, to be well known by her. If he rose to go she did not fly into a flutter. But perhaps there were several hens, all grey and so alike in other respects that Sapó's eye, avid of resemblances, could not tell between them. Sometimes she was followed by a second, a third, and even a fourth, bearing no likeness to her, and but little to one another, in the matter of plumage and entasis. (203-204)

While the conversion of Albertine into a grey hen satirizes Proust's episode in *À l'ombre des jeunes filles en fleurs*, it equally invites a consideration of Moran's statement that "there were three, no, four Molloy's" as a deliberate extension of Proust's cubist narrative composition. Such allusion suggests Beckett as aware of Proust's kaleidoscopic bibliographic construction, making his writing a deliberate deformation of Proust's aesthetic theory of communication media. This is an awareness that Beckett confirms in

his writing on Proust and media technologies. Beckett describes Proust's telephone conversations with Albertine and his grandmother, with particular emphasis on the interplay between presence and absence. He writes:

He has been staying at Doncières with his friend Saint-Loup. He telephones to his grandmother in Paris. (After reading the description of this telephone call and its hardly less powerful corollary, when, years later, he speaks over the telephone with Albertine on returning home late after his first visit to the Princesse de Guermantes, Cocteau's *Voix Humaine* seems not merely a banality but an unnecessary banality.) After the conventional misunderstanding with the Cigilant Virgins (*sic*) of the central exchange, he hears his grandmother's voice, or what he assumes to be her voice, because he hears it now for the first time, in all its purity and reality, so different from the voice that he had been accustomed to follow on the open score of her face that he does not recognize it as hers. It is a grievous voice, its fragility unmitigated and undisguised by the carefully arranged mask of her features, and this faint real voice is the measure of its owner's suffering. He hears it also as the symbol of her isolation, of their separation, as impalpable as a voice from the dead. The voice stops. His grandmother seems as irretrievably lost as Eurydice among the shades. Alone before the mouthpiece he calls her name in vain. Nothing can persuade him to remain at Doncières. He must see his grandmother. He leaves for Paris. (14-15)

Here, Beckett's description of sound technologies emphasizes the fading of the other, the divorce of the material, sonic trace of the other from the individual from whom that trace emanates. In this way, Beckett reads Proust's telephony through Walter Benjamin's concept of the "aura," the source from which a reproduced signal emanates, but fails increasingly to convey. This separation of signal from source recurs in the material procedures of Beckett's sound productions through the techniques of radiophonics and acousmatics, as we shall shortly discover. Beyond examining sound in Proust's work, Beckett additionally emphasizes the role of photography and vision in *la Recherche*, citing it as a mechanism of Proustian memory. Beckett describes Proust's memories of his grandmother following her death:

The notion of what he should see has not had time to interfere its prism between the eye and its object. His eye functions with the cruel prevision of a camera; it photographs the reality of his grandmother. And he realizes with horror that his grandmother is dead, long since and many times, that the cherished familiar of his mind, mercifully composed all along the years by the solicitude of habitual memory, exists no longer, that this mad old woman, drowsing over her book, overburdened with years, flushed and coarse and vulgar, is a stranger whom he has never seen. (15)

Through the mnemonic apparatus of mechanized vision, the material trace of the individual becomes no longer a residual aura of the other, but instead a malleable sequence through which the other is continually refashioned. Such an influence of media production techniques on the perception of reality is registered again through Benjamin, whose description of the effects of the technique of reproduction accounts for Beckett's

reading of Proust: “By making many reproductions it substitutes a plurality of copies for a unique existence. And in permitting the reproduction to meet the beholder or listener in his own particular situation, it reactivates the object reproduced.” (221) It is through the habitual retrieval and review of memories of his grandmother that Proust maintains his internal construction of her identity, a construction that is susceptible to interruptions and deformations as new information is brought to bear on that construct. In this way, Beckett explicitly engages Proust’s filmic narrative composition through the concept of habit, or the habitual storage and retrieval of memory. In so doing, he evolves Proust’s aesthetic theory from the splicing and concatenation of film to the storage and retrieval of stored memory. For Beckett, the individual is constructed through series of read/write operations on an internal index of memories, operations undertaken through biological and cognitive habit:

Breathing is habit. Life is habit, Or rather life is a succession of habits, since the individual is a succession of individuals; the world being a projection of the individual's consciousness (an objectification of the individual's will, Schopenhauer would say), the pact must be continually renewed, the letter of safe-conduct brought up to date. The creation of the world did not take place once and for all time, but takes place every day. Habit then is the generic term for the countless treaties concluded between the countless subjects that constitute the individual and their countless correlative objects. (8)

Beckett’s interpretation of Proust’s kaleidoscopic remembrance takes the form of an index, in which different memories register different perceptions of the individual; these

memories are then arranged and ordered to produce a coherent account of self and other. Resembling the structure of Busa's *Index Thomisticus*, Beckett explicitly uses the language of a visual database to describe this theory of material memory operations, describing the memory as a concordance of saved images:

The memory that is not memory, but the application of a concordance to the Old Testament of the individual, he calls 'voluntary memory.' This is the uniform memory of intelligence; and it can be relied on to reproduce for our gratified inspection those impressions of the past that were consciously and intelligently formed...Its action has been compared by Proust to that of turning the leaves of an album of photographs. The material that it furnishes contains nothing of the past, merely a blurred and uniform projection once removed of our anxiety and opportunism—that is to say, nothing. There is no great difference, says Proust, between the memory of a dream and the memory of reality. (19-20)

Beckett's theory of memory as concordance outlines a situation in which the individual is primarily mediated by her traces, rather than immediate contact or access. In other words, the individual can only exist as a reconstruction undertaken through symbols and signs which stand in for her. It is equally telling that Beckett extends Proust's engagement with old media in describing this dynamic and reconfigurable form. Whereas the telephone, the photograph, and the gramophone (among others) record an enduring material trace of the individual, a lasting record of that person's physical existence in space and in time, Beckett describes recombinant media through which linked records or concordances of such traces can be refashioned to produce and transform accounts of the individual.

Similarly, Beckett's own characters are transformed both as anagram and story element to form multiple versions of themselves.

Beckett's description of the other as cipher marks a corollary transition from analog to digital media, a transition marked by the sorting and rearranging operations of the concordances produced by Roberto Busa's *Index Thomisticus*. As Jake Buckley notes, while the analog and the digital always exist in tandem with each other (rather than one subsuming or replacing the other), "they do not originate as properties of technological objects." (8) Buckley cites the difference between measuring and calculating time as a key example of the shift from analog to digital, describing digitized time "employing a device that intervenes in and breakdown a continuum using several discrete, discontinuous, and finite elements [e.g., a row of numbers], enabling one to predict and mark, by a principle of more and more division, the microvariations within this experience that are normally inaccessible to the human senses." (8) The procedural storage and retrieval of inscribed memories that Beckett describes operates through such a digital device, one that replicates or reconstructs the analog operations of thinking, remembering, and writing. This is a device that carries a physical and institutional instantiation in an early prototype for the personal computer: Vannevar Bush's memex, a sortable index designed to store and retrieve information inscribed on microfilm. A similar device, Bush's differential analyzer, implemented at MIT in 1942, further elucidates the interpenetration between the analog and digital. The analog computer, "comprised a long table-like structure of interconnected shafts, the continuously variable rotations of which were made to represent and compute, by analogy, the relations between changing variables in a differential equation." (8) This analogic computation,

which created concordances between a physical, addressable location in a shaft and a number or variable, structured the digital data with which the computer carried out its physical computation. Such physical operations find their bibliographic instantiation in Beckett's manipulation of the book as dynamic index and Beckett's own deployment of such bibliographic operations as a resistance spy in the 1940s. Physically enacting the operations of microfilm inscription and encoding, Beckett himself recorded material traces of individuals on microfilm as an intelligence agent during the second world war. The inscriptive connection between communication technology and spy narrative therefore evolves from Proust's Dreyfus Affair to Beckett's code war.¹ If Proust's *Jean Santeuil* takes the form of the *petit bleu* that could either have been sent from Dreyfus or Estherhazy, Beckett's Trilogy is the mediated translation and transposition of the individual, undertaken through the analog encoding machines that cycle through infinite permutations and combinations of a given group or individual's identity, intentions, and actions. The emergence of reconfigurable procedures for speculating and deciding between multiple permutations of an individual's identity and location, far from being a purely formal or narrative response to Proust's aesthetic theory, is therefore deeply anchored in the medial ecology in which Beckett composed the Trilogy. By writing the Trilogy as a mediated translation of the other, Beckett writes out the changing nature of the document at the dawn of the digital age.

Beckett's writing codes

Writing through the computational transformation of Proust's media aesthetics, Beckett uses the mathematical manipulation of text to produce false accounts of reality.

Such false narratives are instantiated in the physical books comprising Beckett's Trilogy, authored through the calculation and encoding of text as codebooks. The practice of distorting and deforming a story or identity through the techniques of media production is one Beckett explicitly inherits from Proust.² In his essay *Proust*, Beckett addresses the deformation of reality through Proust's concept of memory, writing "there is no escape from the hours and the days. Neither from to-morrow nor from yesterday. There is no escape from yesterday because yesterday had deformed us, or been deformed by us. The mood is of no importance. Deformation has taken place." (2) As Proust deforms the past, so too does Beckett deform Proust, completely decoupling one's present construction of the past from the past experience from which that construction arises.³ Whereas Proust believes there is a past to retrieve, an authentic individual whose identity can be deduced through speculation, Beckett shares no such assumption. He therefore reads Proust's women as codes and ciphers, representative constructs forever bereft of the identity for which they stand:

But even this new Albertine is multiple, and just as the most modern applications of photography can frame a single church successively in the arcade of all the others and the entire horizon in the arch of a bridge or between two adjacent leaves, thus decomposing the illusion of a solid object into its manifold component aspects, so the short journey of his lips to the cheek of Albertine creates ten Albertines, and transforms a human banality into a many-headed goddess. (34)

Through Beckett's eyes, Albertine is transformed not into an unknowable individual who can only be grasped through multiple incomplete views (a cubist object), but still further

an indexical array of multiple individuals who may be shuffled and ordered into various configurations (in so doing, Beckett evacuates Proust's cubism of its promise of artistic or emotional immediacy). Addressing Albertine as an n-dimensional construct, Beckett picks up on Proust's mathematical metaphors, unpacking the algebra through which Proust attempts to decode the cipher that is Albertine:

Every word and gesture of Albertine are caught up in the vortex of jealousy and suspicion, translated and mistranslated, reapplied and misapplied. Every remembered incident is decomposed in the acid of his mistrust. 'My imagination provided equations for the unknown in this algebra of desire.' But Albertine is a fugitive, and no expression of her value can be complete unless preceded by some such symbol as that which in physics denotes speed. A static Albertine would soon be conquered, would soon be compared to all the other possible conquests that her possession excludes, and the infinite of that is not and may be preferred to the nullity of what is. Love, he insists, can only coexist with a state of dissatisfaction, whether born of jealousy or its predecessor—desire. It represents our demand for a whole. Its inception and its continuance imply the consciousness that something is lacking. (38-39)

For Beckett, understanding the other is an act of translation, of attempting to intercept signals that stand in for the other in the world so that those signals can be reconstructed or re-presented in the imagination.⁴ Translating the other, moving one's perception of her from the physical to the cognitive world, therefore serves as a Heisenbergian exercise in which there exists a hard limit to the accuracy of specific concordances of information

(just as deducing the position of a particle makes its momentum uncertain, so too does deducing the whereabouts of Albertine call her various intentions and motivations into question). This act of cognitive translation also functions as the bibliographic translation, or physical reorganization, of signs and symbols on a page or in a memex. Such translational acts require sequencing the individual elements of the formula or equation that attempts to predict or deduce the attributes of the other, acts undertaken through the Proustian organization of kaleidoscopic fragments or the Beckettian rearrangement of words to produce variant permutations of someone's name, actions, or thoughts. Through the language of translation, Beckett describes Albertine's messages as ciphers meant to mislead and confuse Proust, ciphers that must be anagrammatically unscrambled and decrypted. In this way, the act of translating or unscrambling an anagram parallels the action by which one mechanically decrypts an enciphered message. Beckett uses the language and operations of spywork to understand Proust as he spies on Albertine:

Albertine mentions casually that she may visit the Verdurins. Anagram: 'I may go and see the Verdurins to-morrow. I don't know, I don't particularly want to.' Translation: 'It is absolutely certain that I will go and see the Verdurins to-morrow. It is of the greatest possible importance.' He remembers that Morel has promised to conduct the Vinteuil septuor for Mme. Verdurin, and concludes that Mlle. Vinteuil and her friend will be among the guests, and that by some infernal stroke of cunning Albertine has made an appointment with them for the following evening. (39-40)

Beckett's understanding of Proust as attempting to decode Albertine's enciphered messages, resulting in the paranoid deformation and misreading of those ciphers, also extends to literal encoded messages. One such encoded message is a telegram that Proust misreads, misunderstanding the physical circumstances of the novel's own narrative: "At each halt he suffers from the hallucination that what has been left behind is still before him...in Venice, when a telegram from Gilberte announcing her engagement to Robert de Saint-Loup is signed 'Albertine' through a misreading of Gilberte's vulgar and pretentious orthography." (44) In falsely translating, or transposing the orthography of Gilberte's writing to form the letters of Albertine's name, Proust mistranslates, or misunderstands, the world around him. Such instances of an existence lost in translation underpin the structure of *Molloy*.

Translating Proust's enigmatic others into the world of the Trilogy, Beckett includes numerous deformations of Proust's anagrammatic attempts at spywork. The name of the eponymous protagonist of *Molloy* is itself a malleable cipher tied to the aurality of the name's near-palindrome. Whereas Roussel navigates such aural permutations of written language through the apparatuses of image and impression (displacing the stem of a 'b' to form a 'p', for instance), Beckett instead moves through an array of alternative sounds. Cycling through various permutations of the name's spoken sound, Moran attempts to unscramble the codename Molloy:

Of these two names, Molloy and Mollose, the second seemed to me perhaps the more correct. But barely. What I heard, in my soul I suppose, where the acoustics are so bad, was a first syllable, Mol, very clear, followed almost at once by a second, very thick, as though gobbled by the

first, and which might have been oy as it might have been ose, or one, or even oc. And if I incline towards ose, it was doubtless that my mind has a weakness for this ending, whereas the other left it cold. (113)

The multiple permutations of Molloy's name are, themselves, subject to further degrees of variance through the perceived mind of Youdi, Moran's handler who sends Moran to capture Molloy in the first place. Moran's statement that there exist multiple Molloys is itself an expression of variance, rather than certainty: "And let us not meddle either with the question as to how far these five Molloys were constant and how far subject to variation. For there was this about Youdi, that he changed his mind with great facility." (116)

Translating Proust's misreading of characters into the events, circumstances, and settings that surround them, Beckett further extends the mutable and n-dimensional nature of his characters to other elements of the book, including setting, plot, and dialogue. One such instance of this occurs during Molloy's conversation with the sergeant, in which Molloy writes: "Yes, after all, I had perhaps gone too far in saying that my mother lived near the shambles, it could equally will have been the cattle-market, near which she lives. Never mind, said the sergeant, it's the same district." (22)

Anchoring the shifting and uncertain nature of Molloy's story in the circumstances of his conversation with the Sergeant exposes the possibility that Molloy misremembers his mother's location equally as pretends to misremember in order to misdirect and mislead the sergeant, who Molloy perceives to be threatening him for information. And yet this narrative frame still cannot hold Molloy's deceit. The exchange itself is written in indirect discourse, without apostrophes enclosing the dialogue of Molloy and the sergeant. This stylistic choice highlights the fact that Molloy is recording the details of

this exchange as he writes in his exercise book, underscoring this narrative episode's status as a fictional construct, one subject to the same degree of suspicion the sergeant displays in the exchange. The reader has no assurance that Molloy has not deformed the elements of this exchange in order to mislead, misdirect, or otherwise misinform the reader through his own written pages. Like Proust misreading Gilberte's telegram or the sergeant mistranslating enemy intelligence, the reader is forced to confront the possibility that the physical book she reads arranges its elements to form a false or misleading view of the world.

The Beckettian construction of false narrative therefore operates across linguistic and bibliographic registers, as the task of inventing fiction is simultaneously the task of exploring various permutations and concordances of written language. This reflexive redoubling of encoded and enciphered messages proceeds Molloy's encounter with the sergeant, reminding the reader that the encounter corresponds to two lived experiences: Molloy's remembrance of the episode and the physical act of inscription through which Molloy attempts to translate that remembrance. In so doing, Beckett calls readerly awareness to the phenomenal action of writing fiction, reflexively situating the physical book as a series of concordances that produces a remembered sequence of events (much like Beckett's description of a Proustian assemblage as a photo album or the concordance of multiple microfilm images as a memex). Molloy writes:

...no doubt some day I'll meet them again the sergeant and his merry men.

And if, too changed to know it is they, I do not say it is they, make no mistake, it will be they, though changed. For to contrive a being, a place, I nearly said an hour, but I would not hurt anyone's feelings, and then to use

them no more, that would be, however shall I say, I don't know. Not to want to say, not to know what to want to say, not to be able to say what you think you want to say, and never to stop saying, or hardly ever, that is the thing to keep in mind, even in the heat of composition.

Molloy's closing sentence reads as an anagrammatic or enciphered construction, as a series of clauses produced through variant combinations of the words "not," "want," "say," and so on. At the same time, the experience these clauses describe is precisely that of Molloy inventing a story to mislead the sergeant, a story the sergeant must mistake for truth. Equally as Beckett shows Molloy generating narrative through permutation and speculation, his writing captures the experience of attempting to lie or mislead under scrutiny. The passages performs and constructs its own description, demonstrating the attempt to falsify a cogent narrative by concatenating variant fragments of information. Shortly following this encounter, Beckett writes the reverse situation, in which Molloy accepts a distorted version of reality presented to him by Lousse. Lousse persuades Molloy to live with him after convincing him that he killed her dog, an event of which Molloy has no clear recollection: "...after some time I found myself in possession of certain ideas or points of view which could only have come to me from her, namely that having killed her dog I was morally obliged to help her carry it home and bury it..." (34) The narrative told by Lousse alters the facts upon which Molloy constructs his sense of historical reality, and in so doing influences the actions he undertakes based on those facts. This mistranslation of reality recurs in Lousse's very name, itself a code that Molloy cannot keep straight: her name alternates between "Mrs. Loy," "Sophie," and "Lousse." Attending to the mechanisms and procedures through which Beckett's

narrators become confused invites a corollary repositioning of the status of confusion and indeterminacy in Beckett's Trilogy—rather than indicating Beckett's characters are uncertain or unstable, Beckett's writing instead highlights the extent to which the historical record of a given series of events is subject to manipulation and false translation. Beckett's characters may well be just as confused as the reader herself.

Beckett thus marks a radical shift from Proust in his suggestion that identity comes out of writing (rather than writing coming out of oneself). Couching his expression in the language of mathematical experimentation, Beckett positions writing as the experimental translation of a metaphorical world into a metaphorical text, constituting reality through inscriptive media:

‘An impression is for the writer what an experiment is for the scientist—with this difference, that in the case of the scientist the action of the intelligence precedes the event and in the case of the writer follows it.’
Consequently for the artist, the only possible hierarchy in the world of objective phenomena is represented by a table of their respective coefficients of penetration, that is to say, in terms of the subject (another sneer at the realists). The artist has acquired his text: the artisan translated it. ‘The duty and the task of a writer (not an artist, a writer) are those of a translator.’ (64)

For Beckett, writing does not offer a mimetic or referential account of objective reality, but instead a translation of subjective phenomena into an object-oriented register. Yet the concept of translation does not stop here. It is of additional note that in his description of writing as translation, Beckett himself translates Proust from French into English (indeed,

such translations run throughout Beckett's *Proust*). The extent and nature of this translation is accounted for through Beckett's own definition of the term, in which translation operates as metaphor more than reference, a subjective reconstruction of a concept rather than a neutral representation of an object. To say Beckett translates Proust therefore reveals his writing to explicitly build upon an interpretation of Proust's aesthetic theory and compositional practice, one whose reflexivity echoes the vacillation between descriptions of story and descriptions of writing story present throughout the Trilogy. Beckett indeed reads Proust's writing in such self-referential fashion:

For Proust, as for the painter, style is more a question of vision than of technique, Proust does not share the superstition that form is nothing and content everything, nor that the ideal literary masterpiece could only be communicated in a series of absolute and monosyllabic propositions. For Proust the quality of language is more important than any system of ethics or aesthetics. Indeed he makes no attempt to dissociate form from content. The one is a concretion of the other, the revelation of a world...the Proustian world is expressed metaphorically by the artisan because it is apprehended metaphorically by the artist: the indirect and comparative expression of indirect and comparative perception. The rhetorical equivalent of the Proustian real is the chain-figure of the metaphor. (67-68)

For Beckett as for Proust, form and content are inextricably intertwined. Marcel Proust's *bildungsroman* therefore contains the story of Proust creating that very literary object. Similarly, Molloy and Moran's exercise books contain the stories of them trying to

discern and produce misleading fictional constructs (these constructs being the exercise books themselves). In both cases, the form of the book encapsulates or concretizes the historical experience described in its content. Proust's *Recherche* thus materializes time in the same way that Beckett's exercise books scramble ciphers.⁵ This Beckettian extension of Proust's autopoetics is confirmed in Beckett's own writing. In *Proust*, Beckett describes the link between form and content through the concept of the fresco, writing: "Proust does not deal in concepts, he pursues the Idea, the concrete. He admires the frescoes of the Paduan Arena because their symbolism is handled as a reality, special, literal and concrete, and is not merely the pictorial transmission of a notion." (60)

Molloy's encounter with the sergeant is one such fresco, where the indeterminate and shifting form of Molloy's sentences reifies the content of his misleading speech to the inquisitive sergeant. In her attempt to sort out Molloy's confused writing, the reader metaphorically apprehends the writing conditions in which Molloy communicates (under duress) and physically encounters a literary artifact of such strained communication. Beckett even incorporates the fresco concept into this section of the novel, writing: "I apologise for these details, in a moment we'll go faster, much faster. And then perhaps relapse again into a wealth of filthy circumstance. But which in its turn again will give way to vast frescoes, dashed off with loathing." (63) The verb "dash" recalls the Morse code communication between Molloy and his mother, implying a graphical and metaphorical relation between Beckett's writing and code writing. Far from being coincidence, this formal allusion to code is reinforced in the content of Molloy and Moran's narratives, as they attempt to evade and track each other, writing their

misleading narratives in the very exercise books that Beckett describes as “dashed.” If Proust writes time in *la Recherche*, then—in his Trilogy—Beckett is writing code.

The status of Beckett’s exercise books as code books is disclosed throughout multiple episodes that serve as Proustian frescoes. Such frescoes enact, unpack, and unfold changes in writing brought on by the mechanical translation and transposition of text (or, the emergence of the index form). Immediately following his invocation of the fresco concept, Molloy describes an enigmatic instrument in Lousse’s house, a “strange instrument...for I could never understand what possible purpose it could serve, not even contrive the fanciest hypothesis on the subject.” (63) Molloy continues to describe the instrument as a puzzle, a cipher, doing so through language that itself takes the form of interlinked puzzle pieces:

But for a certain time I think it inspired me with a kind of veneration, for there was no doubt in my mind that it was not an object of virtue, but that it had a most specific function always to be hidden from me. I could therefore puzzle over it endlessly without the least risk. For to know nothing is nothing, not to want to know anything likewise, but to be beyond knowing anything, to know you are beyond knowing anything, that is when peace enters in, to the soul of the incurious seeker. It is then the true decision begins, of twenty-two by seven for example, and the pages fill with true cipher at last. But I would rather not affirm anything on this subject. What does seem undeniable to me on the contrary is this, that giving in to the evidence, to a very strong probability rather, I left the

shelter of the doorway and began levering myself forward, swinging slowly through the sullen air. (64)

The mathematical operation Beckett describes, dividing 22 by 7, produces an irrational number, or a number that can never be accurately represented through a decimal. Attempting to derive the most accurate representation of the number, by carrying it out to the furthest decimal possible, is an infinite exercise in which symbols can never perfectly capture or measure that which they represent, creating a situation where the mathematician must forever calculate. What's more, the number produced through the division of 7 into 22 very nearly resembles pi (carried to the fourth decimal point, the number is 3.1428, whereas pi, carried to the same decimal point, is 3.1416). When carried to the third decimal, Beckett's number becomes 3.143, while pi is 3.142, and at the second decimal the numbers are equal. Thus, $22/7$ stands in for pi until the mathematician carries it beyond the second decimal, revealing through the infinite computation of irrational numbers that Beckett's fraction only nearly resembles pi (much as Molloy, Malone, Moran, and so on only nearly resemble each other). Beckett's index form undertakes the calculation of such proximate irrational numbers; as the mathematician fills her pages with decimals, so too does Molloy fill his pages with letters and "the pages fill with true cipher at last." This algorithmic description is enacted in the very following sentence, in which Molloy fills the page of his exercise book with concatenated expressions that attempt, imperfectly, to account for the reality of his situation: "What does seem undeniable to me on the contrary is this, that giving in to the evidence, to a very strong probability rather, I left the shelter of the doorway and began levering myself forward..." (64) Molloy's own authorial situation is that of the mathematician he

describes, making this scene a Beckettian fresco in which Molloy describes the nature of his own writing; like the mathematician filling her pages with “ciphers,” as he calculates an irrational number, so too is Molloy’s writing of the same enciphered status. This situation is equally concretized in the sentence preceding Molloy’s description of the mathematician, in which he again concatenates translated phrases to write towards a situation his words can never completely capture, carrying out his concept to the ‘decimal’ where: “to know nothing is nothing, not to want to know anything likewise, but to be beyond knowing anything, to know you are beyond knowing anything...” (64) Here, the Beckettian long division of text instantiates Jake Buckley’s description of digital calculation as a process of extended division, exposing the circuits of discourse through which Beckett writes linguistic calculation as a digital device.

Beckett similarly writes the mechanical index form as a fresco when describing Molloy’s sucking stones. In this passage, Molloy attempts to pass the time by deriving a procedure for sorting a series of stones that he may suck, one by one, in order, without repeating the order of the stones until he has cycled through the entire set. Beckett opens the passage by describing it in reflexive terms, making clear that Molloy’s experiment for passing the time functions simultaneously as an experiment for filling more pages of writing: “But in order to blacken a few more pages may I say I spent some time at the seaside, without incident.” (68) As Molloy proceeds through different physical configurations of stones, so too does Beckett proceed through different textual configurations of three elements: Molloy, Molloy’s greatcoat, and the stones. The result is an extremely long passage filled with near-anagrammatic repetitions of the same actions. Early in the passage, Beckett writes:

Taking a stone from the right pocket of my greatcoat, and putting it in my mouth, I replaced it in the right pocket of my greatcoat by a stone from the right pocket of my trousers, which I replaced by a stone from the left pocket of my trousers, which I replaced by a stone from the left pocket of my greatcoat, which I replaced by the stone which was in my mouth, as soon as I had finished sucking it. (69)

Three pages later, after having proceeded through various permutations of this procedure, Beckett writes still:

And when the right pocket of my greatcoat is again empty (of stones), and the five I have just sucked are all without exception in the left pocket of my greatcoat, then I proceed to the same redistribution as a moment before, or a similar redistribution, that is to say I transfer to the right pocket of my greatcoat, now again available, the five stones in the right pocket of my trousers, which I replace by the six stones in the left pocket of my trousers, which I replace by the five stones in the left pocket of my greatcoat. And there I am ready to begin again. Do I have to go on? (72)

Across the pages of the passage, the procedures undertaken by Molloy as character and Beckett as writer are fused, each proceeding through different configurations or concordances of the same elements in order to pass the time. Rather than existing as a fictional representation or retelling of Molloy's actions, this passage constructs Beckett's writing and Molloy's doing as the same procedure. Molloy's experiment in refining his procedure for sucking stones thus simultaneously serves as a Beckettian experiment in producing a stream of writing out of the manipulation of a finite series of elements. This

experiment further characterizes the Trilogy writ broad. As Molloy alters the distribution of his stones, so too does Beckett continually redistribute the elements of his narrative (including character, setting, and plot): “Mrs. Loy” becomes “Sophie,” then “Lousse;” “Sapo” becomes “Macmann;” Molloy’s mother lives in different locations and may or may not also be Lousse; Moran may or may not encounter Gaber in the forest. As Beckett’s frescoes suggest, such uncertainties must be situated in the form of a given piece of writing. And indeed, both Molloy and Moran are writing codes. Molloy describes his physical text as marked with ciphers: “When he comes for the fresh pages he brings back the previous week’s. They are marked with signs I don’t understand. Anyway I don’t read them.” (7) Similarly, Moran begins his writing by explicitly identifying it as a report: “My report will be long. Perhaps I shall not finish it. My name is Moran, Jacques...[my son’s] name if Jacques, like mine. This cannot lead to confusion.” (92) Similarly, the close of the novel, in Proustian fashion, sees Moran sitting at his desk to compose the opening lines of his report; he writes:

in the end I understood this language. I understood it, I understand it, all wrong perhaps. Does this mean I am freer now than I was? I do not know. I shall learn. Then I went back to the house and write, It is midnight, The rain is beating on the windows. It was not midnight. It was not raining.

(176)

Moran concludes his report by directly contradicting the opening lines of the narrative. Moran’s section of the book begins: “It is midnight. The rain is beating down upon the windows.” (92) Yet Moran controverts this very statement in the closing sentences of the narrative, bringing into question the validity of his statements throughout the book. Such

uncertainties are anchored in the genre and form of both character's writing: they are writing reports that others read and in which they include false and misleading information. As Molloy evades the sergeant, filling his page with indecipherable codes and ciphers, so too do Molloy and Moran evade the reader, concealing any valid disclosure of their actions or intentions. In so doing, Beckett divorces writing from story and representation from representamen, authoring textual artifacts that manipulate and rearrange textual elements in order to produce strings of text that do not correspond to, or faithfully account for, the events or reality they claim to record and inscribe. Far from being a purely textual operation, the technique of divorcing signifier from signified, signal from source, such that the source might be manipulated to constitute a new signified (a new source) is one Beckett deploys across multiple media, notably through the sound production techniques of radiophonics and acousmatics.

Writing radiophonics

The Beckettian mechanics of writing or re-presenting memory recur as editorial operations that cross multiple mediums, specifically through the sound production techniques of radiophonics and acousmatics. These operations arrange and recombine a digital signal to reconstruct or call into existence an imagined source. As Graley Herren writes: "Beckett rigorously explored the potential and exploited the limitations of mechanical media—first radio, then film, and ultimately television—to serve as memory machines: sites for recollecting and reinventing personal, philosophical, and artistic pasts." (1) Beyond authoring media objects that reach back to an irrecoverable past, Beckett's memory operations see the index of recorded memory as itself a reconfigurable

object that can deform and distort the past to form alternate histories. In this way, Beckett moves beyond the analog imagination of Edisonian production—which sees old media as a spectral recovery of the past—into a digital world where physical reality itself is subject to constant change (moving even beyond Proust, who believes there is a true story of Dreyfus’s actions that may be eventually recovered).⁶ What’s more, this paradigm also structured the political uses of broadcast media at the time of Beckett’s writing.

Beckett’s shift from analog to digital, from the fading aura to the enduring ephemeral,⁷ registers in transmedia techniques that cross his writing, radio, and television productions. In the same way that a piece of Beckettian writing (a character or situation) can be replaced by a copy of that same writing, with letters or concepts modified and rearranged, so too do Beckettian sound recordings change sounds by modifying and remixing them. Through the techniques of acousmatics and radiophonics, Beckett fashioned sound as a malleable object divorced from its original, physical context of production. Donald McWhinnie explains this technique:

You take a sound—any sound—record it, and then change its nature by a multiplicity of operations. You record it at different speeds, you play it backwards, you add it to itself over and over gain. You adjust filters, echoes, acoustic qualities. You combine segments of magnetic tape...Properly used, [radiophonic effects] have no near relationships with any existing sound, are free of irrelevant associations, and have an emotional life of their own.” (qtd. in Morin 3)

Emilie Morin concurs, reading Beckett as a *musique concrète* practitioner who divorces a sound from its initial cause: “Beckett’s radio texts...[foreground] the specificities of the

medium by capitalizing upon the formal, structural, and narrative opportunities afforded by the magnetic tape and its concomitant repetitions of the same sound.” (Morin 4) This emphasis on the divorce between signal and source, representation and representamen—an emphasis also present in the writing techniques of the Trilogy—recurs in Beckett’s televised work. Reading the inability of Beckettian media to convey the history of individual from which it arises, Daniel Albright writes: “Beckett’s repeated assertions that his art is the art of impotence...[are], I believe, veiled ways of saying that the true failure lies not with Beckett the particular artist but with art itself, always at the mercy of decomposing and perverse media. Beckett saw himself as an artist who was unusually honest about art’s inability to carry out the artist’s goals.” (qtd. in Herren 8) Graley Herren extends Albright’s argument to the media specificities of Beckett’s television work, asserting: “if this label sticks to Beckett’s work in general, it adheres with special strength to his teleplays.” (19) While this Edisonian reading of Beckett’s televised work emphasizes his intellectual connection to the media theory of Roussel and Proust, it further indicates Beckett’s mediatic deformation of the past as a transmedia technique that crosses his work on sound, television, and writing. Such techniques are anchored in procedures for media inscription and revision, crossing the radiophonic effects of *musique concrète* sound editing, television filming, and the writing production of literary documents (including novels and teleplays). Herren suggests such a media specific reading of Beckett’s artistic works, asserting:

To be sure, the scripts for each teleplay have been published, but these scripts represent little more than recipes for final products that can only be found in the broadcasts themselves. And to be sure, there are ‘material’

artifacts of these broadcasts left behind in the form of videotapes...Put another way, the teleplays are not simply haunted by an air of the dead: they are dead air. (21)

Beyond Beckett's teleplays, Herren's argument applies to a range of Beckettian mediums. In particular, Herren's reading of teleplays as recipes for final products transmediates Daniel Ferrer's argument that "a manuscript is not a text but a protocol for making a text." (qtd. in Van Hulle 11) Rather than being apprehended as separate entities, the arguments concerning Beckett's engagement with media form emerge as a continuum of artistic production procedures that cross comparative media in use at the close of the second world war (radio, film, television, and written stories). Such an approach reads Beckett not as reaching back to the disembodied tradition of Edisonian thought, but instead working through media specific transformations of the Edisonian legacy in a medial ecology where the signal itself can be manipulated to concord with new sources of information, migrating from letter to radio, teleplay to broadcast, manuscript to novel, and so on.

Rather than being disembodied or hollow entities, whose stories are divorced from physical reality, Beckett's characters instead emerge as concrete individuals attempting to navigate a medial ecology in which stories of the world around them are often incomprehensible and indecipherable. Nicholas Zurbrugg reads this situation across Beckett's plays and radio work, noting:

As in *The Unnamable*, the interrogators in *Rough for Radio II* inhabit a mysterious situation in which only the most basic imperatives are clear.

The Unnamable's interrogator confides: 'you don't understand, neither do

I'; and the animator similarly admits: 'It does not lie entirely with us, we know.' All that is 'known' is that the Unnamable has somehow or other evaded or avoided his 'identity,' just as 'Fox' has somehow or other refused to treat some crucial subject. (258)

Zurbrugg goes on to read such indeterminacy as a Proustian construct, arguing that "viewed in Proustian terms, the Unnamable, like Molloy, Malone and all of Beckett's subsequent narrators, discover that... 'we have the gift of inventing stories to soothe our sufferings.'" (258) While Beckettian works such as *The Unnamable* and *Waiting for Godot* may be interpreted as stories told to pass the time, such interpretations can further consider the media specificity of invented stories.

The practice of inventing stories to "[evade] or [avoid] [one's] 'identity'" or to "refuse to treat some crucial subject" is rooted in the media technologies with which Beckett composes, and their use in spy communication during World War II. The procedural production and transmission of fiction disguised as fact, invented or algorithmically generated stories passed off as historical truth, is not a purely invented form. It is also a historical phenomenon rooted in the media technologies of World War II, as Michael Paterson confirms:

Parallel with the open conflict that raged between 1939 and 1945 there were other, hidden wars, and what they all had in common was that they were wars of communication, in which success depended on a flow of concealed and closely guarded information. Sometimes this meant a smuggled written message, at others a secretly transmitted wireless signal,

or weeks and months of eavesdropping on the radio traffic of the enemy.

(10)

Reading Beckett's narratives as structured through such forms historicizes the tension between truth and fiction that underpins its form and content. The narratives of Molloy, Moran, and Malone can be read either as documents that attempt to secretly disclose hidden information or, on the other hand, conceal and veil true information among a slew of false details and deformations of the truth. Like the radiophonic sound recording, Beckett's writing fails to disclose a stable or real source of representation, imbuing Beckettian codework with the same representative fidelity as his radiophonic productions. In this way, Beckett's procedural narratives take the form of spy transmissions that circulated by telegram, conversation, microfilm, and radio in the 1940s. While the wars of cryptology and Enigma encoding were waged in secret at Bletchley Park, encoded and scrambled messages circulated openly through the media technologies of Beckett's day, particularly by radio and telegraph. Far from being anomalous, the incoherent and nonsensical narratives of the Trilogy are in fact continuous with the stories wartime publics frequently encountered in their daily lives:

Communications, whether by radio or letter, had to be shrouded in secrecy, with use of passwords, code words, euphemisms and gibberish to baffle enemy eavesdroppers. This was characteristic of all 'secret wars' and was much in evidence by the start of the conflict in 1939. A story was published a year earlier in the United States, when many Americans knew little about the shadow lengthening across Europe, made use of a code as its central theme. *Address Unknown*, a short novel by Katherine Kressman-

Taylor, became a bestseller in the US...By the simple device of sending frequent letters—knowing that they will be read by the Gestapo—whose meaningless contents suggest a developing plot, the dealer is able to have his former friend ruined and arrested.” (Paterson 11-12)

Much like Kressman-Taylor’s novel, Beckett’s *Trilogy* also contains “meaningless contents suggesting a developing plot.” Such narratives invite a reconsideration of the relationship between code and machine over the course of WWII. Code and ciphers were frequently scrambled and unscrambled, encoded and decoded, using widely available communication media.

The historical emergence of code as a pen and paper operation, before the rise of ubiquitous computing, is manifest or instantiated in Beckett’s writing techniques. As cryptanalysts were creating mechanical concordances of letters to break the Enigma code, everyday publics similarly began to manipulate and transform indexical arrays of code in their daily lives. Rather than seeing Beckett’s book as a machine, we may equally consider the machine as a book, writing the document itself as a manipulable technology. Such dawning digital understandings of the document were frequent in the 1940s: “Once the war began millions of people made use of personal codes to keep in touch with their friends and relations in circumstances where security considerations, or capture, might rob them of the freedom of expression.” (Paterson 12) For instance, Lieutenant GP Darling secretly encoded military reports to his superior officer in his personal letters to his parents. This encoded communication was achieved by creating an index of personal goodbye messages that corresponded to different messages; for instance, “My Dearest Mother & Daddy” meant “confidential books and ashes destroyed,” while “M Dearest

Mother” meant “confidential books destroyed” and “My Dearest Father” meant “asche destroyed.” (Paterson 12) As Beckett’s authors combine words and phrases in mathematical fashion, so too did Darling use “Mother” and “Father” as symbols meant to represent different pieces of information; these symbols could then be manipulated and translated to form different bits of encoded content.

Such practices were not confined to solely to written correspondence, but also shaped sound transmission procedures via radio. The BBC, for instance, regularly opened its nightly broadcasts with Beethoven’s Fifth Symphony. Little known to German intelligence, the opening notes of the piece, whose length translates to “dot-dot-dot-dash” in morse code, represented the letter “V” for victory. Such deployments of encoded media represent the emergence of digital communication. Rather than representing the aura or material trace of Beethoven’s fingers, here, the notes of the symphony align, in a concordance or index, with other pieces of signifying content. As the aura becomes malleable, manipulable, and algorithmic—divorced from its source as emphasized by Beckett’s radiophonic, writing, and television production techniques—mediated communication enters the digital age.

The rise of encoded communication produced stories that often made little sense, a phenomenon strengthened by the deliberate inclusion of nonsensical stories into public radio broadcasts:

Twice every evening a batch of announcements, disguised as and including personal messages, was broadcast in the appropriate language.

Many of these sounded absurd. Some of them were deliberately intended

to confuse and irritate listening German counter-intelligence operatives, while others had clear meanings for specific groups. (Paterson 14)

Such nonsensical personal narratives, a genre of story that Beckett's characters themselves produce, were structured through the use of codes and ciphers. Through the use of encoding and encipherment to deform the content of written correspondence, sound transmission, and telegraph communication, the physical structure of media became unhinged from the physical reality it claimed to record, inscribe, or transmit (anchored in the Beckettian techniques of radiophonic sound editing and index or memex writing). The procedural deformation of media objects to mislead and misinform, practiced throughout the code war of the 1940s, recurs throughout Beckett's Trilogy. Like the stones in the pockets of Molloy's greatcoat, the elements of Beckett's Trilogy are constantly repositioned and rearranged, constituting the Beckettian writing of an encoded and enciphered narrative, of the very sort Paterson documents. Malone confirms the indexical construction of his narrative, explicitly referencing the stone sucking episode from *Molloy*, when he writes:

Then it will be all over with the Murphys, Merciers, Molloys Morans and Malones, unless it goes on beyond the grave...For this may well be my last journey, down the long familiar galleries, with my little suns and moons that I hang aloft and my pockets full of pebbles stand for men and their seasons, my last, if I'm lucky." (236-237)

In disclosing his narrative to be constructed as Molloy arranges his sucking stones, Malone translates the kaleidoscopic construction of Proustian narrative into the algebraic manipulation of symbols. Rather than reconstructing the past as kaleidoscope, Malone

instead uses such operations to translate and deform his present circumstances (unlike Moran, Malone does not offer a coherent history of the circumstances that lead to the composition of his story). As Malone translates his characters (changing Sapo to Macmann) and even his own environment (transforming the solitary room in which he writes into Macmann's hospital room) other and elsewhere become digital, malleable constructs. Beckett's Malone uses code writing to construct an entire world around himself.

Beckett's malleable code writes into being a malleable world, in which the textual reconstruction of a given arrangement of symbols corresponds to the physical reconstruction of physical, phenomenal actions. Whereas Roussel's Talou-Yaour records the physical actions of his troops in a written code (his Jérourke) Beckett's narrators act as spies who might intercept that code and attempt to reconstruct the actions of Talou's troops by decoding it. In this way, both the radiophonic editor and the text encoder manipulate a digital signal to reconstruct potential and imagined sources of information. Moran openly describes himself as engaged in such spy operations, writing "Peeping and prying were part of my profession. My son imitated me instinctively." The codework of World War II often involved such spying operations, in which intelligence agents would arrange intercepted communications in order to reconstruct the physical actions of troops they could not perceive directly, even using such operations to predict future movements of a given unit:

Seldom are cryptograms encountered in a vacuum. While a single or even a handful of enciphered messages may resist solution, the situation may not be the same when hundreds or thousands of messages are available for

study. An army, for example, is a very complex organization. Scores of units need to pass messages and reports back and forth hourly. Often, text has to be sent from lower echelons to the higher ones, which frequently necessitates repeated re-encipherment in different cryptographic systems. Routine reports provide stereotyped plain text. Enciphering errors and transmission problems abound with the requisite repeated text...Even if solutions are hard to come by, "traffic analysis" provides a general organizational view of the enemy and may suggest areas for concentration of effort. (21)

These wars of information functioned simultaneously as wars of thinking and communication. Knowing the Germans would intercept their communications, Allied forces deployed the tactic of spoofing communications between fictitious divisions. This meant "the invention of radio call signs for each unit, and regular sending of Morse signals between them, so that enemy listeners could use these to track the 'movements' of different formations." (Paterson 15) In his 1975 report on Ultra, David Kahn confirms:

The British used their tame spies to feed false information to the Germans before and during the Normandy invasion. The information helped lead the Germans to believe that there were some 79 Allied divisions in Britain, whereas in fact there were only 45. The Germans expected that these divisions would be used somewhere, and so they held an entire army, the 15th, to the north in the Pas de Calais while Eisenhower was attacking further south in Normandy. This meant less resistance to the invaders and contributed decisively to the Allied lodgment. (6)

Running alongside the secret success of the codebreaking efforts at Betchley Park is a corollary shift in the nature of the document itself, which emerges as a malleable construct whose bibliographic organization corresponds to changing organizations of physical entities in real time. Beckett's writing registers and communicates such changes, moving from the fading aura of Raymond Roussel and Marcel Proust to acts of reverse engineering multiple versions of past, present, and future.

Such intelligence operations directly figure into the Trilogy, notably including Malone's description of the Lamberts, who use wireless communication to observe and share the comings and goings of Sapo on their farm. Beckett's description of the spywork conducted by the Lamberts replicates the traffic analysis conducted by the typists and academics involved in World War II:

And even on the road, of which segments were visible more than a mile away, nothing could happen without their knowledge, and they were able not only to identify all those who passed along it and whose remoteness reduced them to the size of a pin's head, but also to divine whence they were coming, where they were going, and for what purpose. Then they cried the news to one another, for they often worked at a great distance apart, or they exchanged signals, all erect and turned towards the event, for it was one, before bowing themselves down to the earth again. And at the first spell of rest taken in common, about the table or elsewhere, each one gave his version of what had passed and listened to those of the others. And if at first they were not in agreement about what they had

seen, they talked it over doggedly until there were, in agreement I mean, or until they resigned themselves to never being so. (205)

By recording the actions of Sapo from different vantage points and then systematically collating or emending the variants between their records, the Lamberts engage in operations to reconstruct the phenomenal actions of Sapo from a distance. Such editorial operations, fictionalized in Malone's description of the Lamberts, were undertaken daily throughout the duration of the second World War by writers who intercepted and transcoded information, constituting "the war waged by armies of clerks, typists, linguists, analysts and assorted academics to discover the intentions—and weaknesses—of the enemy by breaking its codes." (Paterson 10) These documentary decryption techniques served as an exercise in large-scale collaborative editing, one whose operations sought to reconstruct the physical procedures of a distant individual or organization. In other words, rather than being a material trace of the dead or the past, medium-specific signals carried properties that corresponded to real-time information about a distant other. While Proust could only speculate Albertine's whereabouts and intentions, the intelligence agents of World War II actively intercepted and reconstructed material markers of their enemy's actions:

Once codebreakers came to understand the mindset of their enemy counterparts, and acquired familiarity with the phrases of greeting, reporting and routine enquiry, they were able to work speedily through encoded radio messages, even when the cipher key was changed every week or, as soon became the case, every day. For more than three years

after the finding of the first code book, British Naval Intelligence was able to monitor daily the messages of its German counterpart. (22)

Such efforts went even beyond piecing together the enemy's movements in attempts to reconstruct other's intentions and thought processes, predicting future actions through the indexical read/write operations of cipher breaking. As David Kahn explained to the American Historical Association in a 1976 report disclosing the role of the Allied codebreaking efforts in winning the war, "If the enemy can break the code or cipher quickly enough, he can take countermeasures to spoil the general's plans. It's like sticking your head into the other team's huddle." (2) Michael Paterson similarly describes codebreaking as "The ability to gain access to the very thought processes of the enemy... a major epic of ingenuity, and a great adventure." (8) Such operations are at work in the Trilogy. For instance, as Beckett proceeds through various textual permutations of Molloy's stones, pockets, and methods of arranging them—as a decoding process alternates through various configurations of letters—he actively constructs the thought process through which Molloy attempts to refine his stone sucking procedure. Such writing does not suggest Beckett actively imagined or envisioned Molloy's operations and then composed this episode after the fact, but instead that he proceeded through multiple permutations of his phrases to actively construct and produce Molloy's thought process through the act of inscription itself. Dirk Van Hulle notes the concordance between Beckett's writing and his narrators' thinking, arguing: "[Beckett's] *écriture a processus* seems to coincide to a high degree with his narrator's method... the diachrony of the genesis [of the book] almost coincides with the novel's synchronic structure." (192) Like the wartime deployments of communication technology, Beckett's

documentary inscription works to reverse-engineer the intentions, actions, and thought processes of his characters, whose emergence as mediated subjects also transforms them into media objects. The transformation of bibliography from an operation that records or preserves the past to one used to recreate and reconstruct past, present, and future, enacts a corollary transformation in the historical role played by communication media in understanding and apprehending others. Beckett's writing does not arise out of Molloy's thinking; Molloy's thinking exists only as Beckett writes.

The Unnamable transformation of the analog document

Beckett's *Unnamable* constructs the narrator as a computational object, itself an object-oriented bundle of narrator-functions rather than a coherent person or subject. The ontological status of *The Unnamable* as a function returns the computational transformation of the document, emerging through the bibliographic and cryptographic apparatuses that underpin the structure of Beckett's writing.⁸ As the Trilogy comes to a close, the mechanics of textual arrangement and encipherment overtake the narratives they produce, resulting in a novel that primarily translates its own inscriptive procedures into narrative form. Dirk Van Hulle confirms the complete novel translates the "vertical" or diachronic genesis of a manuscript into the "horizontal" or synchronic text of a published work. (199) Such diachronic operations shape the majority of *The Unnamable*, which both describes and performs the ceaseless, unachievable attempt to produce a coherent narrative structured primarily through linguistic difference or variation. The pages of *The Unnamable* not only describe this action, but bibliographically represent it through a text written in literal indexical fashion, a text whose syntax echoes the structure

of early computing platforms (including Busa's *Index*, but also Vannevar Bush's memex). This form is structured through Beckett's writing as an array of comma separated phrases:

...trying to cease and never ceasing, seeking the cause of talking and never ceasing, finding the cause, losing it again, finding it again, not finding it again, seeking no longer, seeking again, finding again, losing again, finding nothing, finding at last, losing again, talking without ceasing, thirstier than ever, seeking as usual, losing as usual, blathering away, wondering what it's all about, weeping what it can be you are seeking, exclaiming, Ah yes, sighing, No no, crying, Enough, ejaculating, Not yet, talking incessantly, any old thing... (389)

Indexical structures of this sort, which stand more as lists or registers of potential alphabetic solutions to a given cyptogrammatic equation than coherent stories or plots, can be traced back to changes in analog media. The teleprinters frequently employed by typists and clerks during the war functioned through an innovation upon Charles Tainter's modification of the gramophone. Whereas tainter's method used wax to etch sonic grooves into a record, teleprinters further used such material markings to convert linguistic symbols into digital data through concordances between specific sequences of markings and specific characters. This same method structured the transmedia techniques of encipherment, including the BBC's use of Beethoven's Fifth Symphony and the enciphered structure of personal correspondence; similar techniques found their mechanical instantiation in the mechanism of the pinwheel rotor, used to align two shifting alphabets to produce alphabetic concordances. This cryptographic continuation

of Tainter's innovation marked the digital transformation of the mechanisms of analog media, using rotative inscription to produce and transmit digitized information:

Pinwheel rotors were also the principal ingredient in yet another cryptographic stew of machines—the cipher teleprinters. These machines are used for automatic and "on-line" applications via phone line or radio. Generally speaking, their use is warranted when large volumes of traffic must pass quickly between fixed points. Data is represented for transmission using the Baudot teleprinter code shown below, which assigns five "marks" or "spaces" for each character. (Deavours and Kruh 13)

The mechanical production of such digital data can be traced to the operation of turning that unites the gramophone, the kinetograph, the magic lantern, and even the Enigma and bombe machines, as David Kruh describes them:

The most important principle employed for this encipherment was that of the rotor. The rotor is a wired codewheel. It's a piece of hard rubber or makelite about the size and shape of a hockey puck. Twenty-six brass electrical contacts stud one face of the rotor and 26 the other. They are connected at random by wires. When several of these rotors are placed side by side in a cipher machine, this wiring forms a maze. When a cipher clerk presses a typewriter key, an electrical current flows through the maze and enciphers the letter. As the rotors turn, the maze changes, and so does the encipherment. The effect was an extremely secure cipher. (2)

While the anagrammatic operations of Molloy, Moran, and Malone represent the indexical manipulation of text, the specific mechanisms of early computing technology operated through the procedures of circular rotation (rather than the linear or otherwise flat stream of variants presented in the first two novels of the Trilogy). Yet, strangely enough, such rotational combinatorics appear in the writing of *The Unnamable*, which—echoing Malone’s earlier fresco of calculating an irrational number—describe a machine cycling through an infinite combination of words. Beckett evokes such mechanics throughout the novel, writing:

For if by dint of winding myself up, if I may venture that ellipse, it doesn’t often happen to me now, if by dint of winding myself up I must inevitably find myself stuck in the end, once launched in the opposite direction should I not normally unfold *ad infinitum*, with no possibility of ever stopping, the space in which I was marooned being globular, or is it the earth, no matter, I know what I mean. (319)

Here, the mechanism of winding oneself up in order to spin indefinitely in the opposite direction, a mechanism producing the series of comma separated phrases that then follow, nearly resembles the mechanism of the pinwheel rotor. *The Unnamable* itself unfolds *ad infinitum*, ending with the lines “I can’t go on, I’ll go on.” (418) Beckett evokes the same mechanics elsewhere, explicitly characterizing such writing as purely engrossed in the production of form (rather than the production of intelligible content). Beckett confirms: “I have only to go on, as if there was something to be done, somewhere to go. It all boils down to a question of words, I must not forget this.” (338) Elsewhere, Beckett explicitly

links the procedural production of words to the mechanics of motion—again tying the production of his own writing to the mechanisms of mechanical inertia:

... I was entirely absorbed in the business on hand and not at all concerned to know precisely, or even approximately, what it consisted in. The only problem for me was how to continue, since I could not do otherwise, to the best of my declining powers, in the motion which had been imparted to me. This obligation, and the quasi-immobility of fulfilling it, engrossed me in a purely mechanical way, excluding notably the free play of the intelligence and sensibility, so that my situation rather resembled that of an old broken-down cart- or bat-horse unable to receive the least information either from its instinct or from its observation as to whether it is moving toward the stable or away from it, and not greatly caring either way." (322)

Such descriptions mark *The Unnamable* as a radical break from—but also a continuation of—the inscriptive experiments of Molloy, Moran, and Malone. While the earlier narratives of the Trilogy construct indexical writing in both form and content, *The Unnamable* transduces the pinwheel mechanics of early encoding technologies into the narrative motion of an implied author. This formal eclipse of content shapes *The Unnamable*'s version of Molloy's sucking stone passage. The *Unnamable* index produces the following concordances:

If instead of having something to say I had something to do, with my hands or feet, some little job, sorting things for example, or simply arranging things, suppose for the sake of argument I had the job of moving

things from one place to another, then I'd know where I was, and how far I had got, no, not necessarily, I can see it from here, they would contrive things in such a way that I couldn't suspect the two vessels, the one to be emptied and other one to be filled, of being in reality one and the same, it would be water, water, with my thimble I'd go and draw it from one container and then I'd go and pour it into another, or there would be four, or a hundred, half of them to be filled, the other half to be emptied, numbered, the even to be emptied, the uneven to be filled, no, it would be more complicated, less symmetrical, no matter, to be emptied, and filled, in a certain way, a certain order, in accordance with certain homologies, the word is not too strong, so that I'd have to think, tanks, communicating, communicating, connected by pipes under the floor, I can see it from here, always showing the same level, no, that wouldn't work, too hopeless, they'd arrange for me to have little attacks of hope from time to time, yes, pipes and raps, I can see it from here so that I might fool myself from time to time, if I had that to do, instead of this, some little job with fluids, filling and emptying, always the same vessel, I'd be good at that, it would be a better life than this, no, I mustn't start complaining, I'd have a body, I wouldn't have to speak, I'd hear my steps, almost without ceasing, and the noise of the water, and the crying of the air trapped in the pipes, I don't understand, I'd have bouts of zeal, I'd say to myself, The quicker I do it the quicker it will be done, the things one has to listen to, that's where hope would come in, it wouldn't be dark, impossible to do such work in the

dark, that depends, yes, I must say I see no window from here, whereas here that has no importance, that I see no window, here I needn't come and go, fortunately, I couldn't, nor be dexterous, for naturally the water would have great value and the least drop spill on the way, or in the act of drawing, or in the act of pouring, would cost me dear, and how could you tell, in the dark, if a drop, what's this story, it's a story, now I've told another little story, about me, about the life that might have been mine for all the difference it would have made, which was perhaps mine, perhaps I went through that before being deemed worthy of going through this, who know towards what high destiny I am heading, unless I am coming from it. (402)

This passage reimagines Molloy's sucking stone fresco with one half of Beckett's index missing: the procedure of algorithmic textual production does not correspond to concrete physical actions and corollary thought processes undertaken by an embodied character. Such is the epistemological, ontological, and inscriptive status of *The Unnamable*, which concretizes the analog manipulation of text devoid of any stable or otherwise fixed referent. The opening paragraph of the book brings such questions to the fore through Beckett's index form:

These things I say, and shall say, if I can, are not longer or are not yet, or never were, or never will be, or if they were, if there are, if they will be, were not here, are not here, will not be here, but elsewhere. But I am here. So I am obliged to add this. I who am here, who cannot speak, cannot think, and who must speak, and therefore perhaps think a little, cannot in

relation only to me who am here, to here where I am, but can a little, sufficiently, I don't know how, unimportant, in relation to me who was elsewhere, who shall be elsewhere, and to those places where I was, where I shall be. (303)

This infinite sequence of potential combinations, each standing for a reality to which that sequence no longer materially collocates or corresponds—makes reality itself subject to Heisenbergian variance or uncertainty when apprehended uniquely through a dynamic textual system. These versioned accounts of self, other, and environment were routinely produced by the cryptanalytic machines of Bletchley Park, which deployed the mechanics of rotation to anagrammatically reconstruct multiple permutations or interpretations of reality. Such deformations of representative fidelity operated through mechanical deformations of old media, as the products of the Rousselenian rotary press and the Proustian magic lantern exchanged their connection to a fading past for concordances with a material present, structured through the wireless transmission of the telegraph, radio, television, and so on. The machine act of correlating one set of information with another emerged through the wartime applications of text encoding.

While there is no evidence to suggest Beckett was aware of the Allied codebreaking efforts at Betchley Park as he composed the Trilogy, Beckett's role in the communication war is quite concrete. During the war, Beckett worked as a resistance spy with “a Paris-based cell of the SOE (Special Operations Executive) named ‘Gloria SMH’...as a liaison agent and translator of secret reports.” (Knowlson n.p.) In 1942, Beckett narrowly escaped capture by the Gestapo when his many of his cell were betrayed and sent to deportation camps (Knoson n.p.), any of whom could stand in as the

narrator of “Malone Dies.” Similarly, Molloy’s attempts to evade capture and Moran’s attempt to decipher stranger messages parallels not only the historical experience of spies involved in World War II, but also that of Beckett himself. Secret documents were often passed on and translated in the form of microfilm, a documentary medium that Beckett himself used heavily in his role as a resistance translator. Marjorie Perloff confirms:

As a neutral Irishman who spoke fluent French, Beckett was in great demand; he and his companion (later wife) Suzanne Deschevaux-Dumesnil joined Gloria, a *reseau de renseignement* or information network, whose main—and dangerous—job was to translate documents about Axis troop movements and relay them to Allied headquarters in London. (82)

Perloff further documents “the coding of messages and transfer of microfilm, hidden in matchboxes, toothpaste tubes, and so on,” anchoring the Beckettian translation and deformation of language in the medium specificities of wartime microfilm. (82) As Beckett translates *The Trilogy* from French to English, so too did he translate secret documents in his role as an intelligence agent. And it is precisely this inscriptive medium upon which Vannevar Bush’s memex machine itself was meant to be constructed, as Colin Burke explains:

To use the speed of light itself to search a highly compact storage medium was a heady prospect in the days of punched cards, before digital electronic computers had been developed. And the same technology could also be used both for codebreaking and to construct mechanized, miniaturized libraries. Fortunes might be made mechanizing the records of

business and government agencies! Vannevar Bush was far from being alone in trying to harness microfilm for information retrieval or for cryptanalysis, but his efforts were so intimately tied to major forces in America during World War II and the Cold War that his project deserves special attention. (xvii)

The formal constraints of Beckett's Trilogy, as he writes the memex form (structuring recorded memories as a sortable index), directly parallel the information science technologies that influenced the development of the Allied codebreaking machines, as well as the digital computers that proceeded from them. Such memex operations are present in the genesis of *The Unnamable*. As Dirk Van Hulle notes, Beckett originally wrote the novel's ending (writing, "I can't go on, I'll go on.") twenty pages into the exercise book that forms the manuscript of the novel; Beckett later ripped out those two pages and glued them into the back of the book. (193) The pinwheel mechanics of cycling through various permutations of narrative thus finds physical manifestation in the arrangement procedures of Beckett's manuscript writing, which involved displacing narrative fragments to prolong the process of textual production. Sorting an index in order to generate narrative is the experimental aim of *The Unnamable's* writing procedure, as was that of the codebreaking experiments emerging from the military application of Vannevar Bush's memex. This historical entanglement of library science with cryptanalysis concretizes a reading of Beckett's books as machines (or, more precisely, Beckett's language machines instantiated in the form of a book). In producing a book in the form of a memex, Beckett writes through the mechanisms by which the Allied forces conducted the information war that led to the development of digital

computing. To the extent that codebreaking and codemaking technologies are directly tied to documentary search-retrieval and storage technologies (the memex), the construction of Beckett's frescoed Trilogy is symptomatic of the computational transformation of the document itself:

The relationships between the birth of information science and the development of the technology and institutions of secrecy in American were not apparent. Librarians and information specialists did not realize that the technological revolution that was causing the information problem was also creating the age of secrecy. Few understood that because the logic of secrecy was the mirror-image of the logic of information many methods in one realm were transferable to the other. Only a very select few knew that much of information technology of the Cold War years was sponsored and developed by the cryptologic and intelligence agencies...By the 1920s, the new automatic encryption machines, such as Germany's Enigma, led to a search for revolutionary cryptanalytic tools and methods. At the same time that the Documentalists were forging their ideas and organizations, a group of reformers in the American military was attempting to create a new technology for cryptanalysis. That search created a very direct, though secret, connection to the crusade for the modern library, a relationship that continued through World War II and into the postwar era. (8)

The book form and the early forms of analog computing form, in turn, a historical and mechanical enchainment of documentary production anchored in the informational

structures of the library. To reduce Beckett's trilogy to a coincidental prediction of or similarity to Turing's bombe is therefore to overlook both rapid comparators as early computing experiments that disclosed the dominant material structures of mid-twentieth century information.

The technological and ideological apparatuses through which the document emerged as a sortable, searchable index, cross book history and computer science alike. Through the military application of Bush's memex, the comparison of textual variants was translated into the algorithmic analysis of informational structures:

The histories of Bush's and Hooper's dreams for the Rapid Selector and the Comparator are more than just sad but fascinating stories of struggles to turn ideas into hardware. They are stories of the transfer of technology to and from the private and military sectors...there is an almost bewildering trail from the first Selector to America's version of the anti-Enigma machine, the Bombe, and, finally, to the birth pangs of a useful general purpose electronic computer in the 1960s. (Burke 12)

Such digital transformations of textual variance, registered through the mechanics of Beckett and bombe, shaped and informed the rise of digital computing and its structured programming languages. As John Bath, Alyssa Arbuckle, Constance Crompton, Ray Siemens, and I note, with the INKE team:

Both Fredson Bowers and Charles Hinman (pre-eminent figures in the "New Bibliography" during the mid-20th century) were employed as cryptanalysts during World War II. Alan Galey suggests that, as both code-breaking and analytical bibliography relied upon technological

advances in order to discover patterns in apparent chaos, the two men, knowingly or not, brought the influence of information theory and computerization to textual studies. (n.p.)

In other words, the practices of scholarly editing—including variant comparison, document searching, and information retrieval—carry as their afterlives the system architecture of ubiquitous computing:

The United States and Britain carried with them into the postwar period world viewpoints largely shaped by the cryptanalytic triumphs obtained during the war. The machines used in that conflict did not disappear with the armistice. For decades thereafter (and even today to some extent), the same machines remained in use. Their ghosts appear today in computer systems, such as the UNIX operating system and innumerable commercial “black boxes.” (Deavours and Kruh xi)

The construction of the book as a dynamic textual system thus migrates from new bibliography to early computation, only to return back to the academy through the institutional afterlives of cryptanalysis (otherwise known as early humanities computing). Recovering Beckett’s *Trilogy* as a dynamic textual system therefore also means restoring its status as an early computational object, an artifact that registers the convergence of book history, information science, and military secrecy through which early computing emerged. As the mechanics of cryptanalysis and rapid comparison migrated from the analog computers of the war to the digital computers that followed, during the 1950s and 60s, the apparatuses of wartime consciousness migrated from the embodied inscription of Beckett and his fellow agents to the functions and procedures of system architecture,

software engineering, and structured programming. Revealed through the digital deformations of Beckett and bombe, the structure of written language passed through an inscriptive event that fundamentally changed its operating systems:

all the words they taught me, without making their meaning clear to me,
 that's how I learnt to reason, I use them all, all the words they showed me,
 there were columns of them, oh the strange flow all of a sudden, they were
 on lists, with images opposite, I must have forgotten them, I must have
 mixed them up, these nameless images I have, these imageless names,
 these windows I should perhaps rather call doors, at least by some other
 name, and this word man which is perhaps not the right one for the thing I
 see when I hear it, but an instant, an hour, and so on, how can they be
 represented, a life, how could that be made clear to me, here, in the dark, I
 call that the dark, perhaps it's azure, blank words, but I use them, they
 keep coming back , all those they showed me, all those I remember, I need
 them all , to be able to go on, it's a lie, a score would be plenty, tried a
 trusty, unforgettable, nicely varied, that would be palette enough, I'd mix
 them, I'd vary them, that would be gamut enough... (411-412)

Divorcing his symbols, ciphers, and codes from the physical constructs they represent—
 as The Unnamable decouples representation from representamen, object from subject,
 key from hash—Beckett's digital deformations introduce freeplay into the signifying
 system of his memex machine. The Unnamable can no longer distinguish which concepts
 are evoked by the algebraic formation of its signifying symbols, surpassing “the point at
 which the substitution of contents, elements, or terms is no longer possible,” or, “the

center, [where] the permutation of the transformation of elements (which may of course be structured enclosed within a structure) is forbidden.” (Derrida 279) As history and reality become purely textual constructs, subject to deformation and manipulation through the algorithmic translations of Beckettian language, they come to embody Jacques Derrida’s argument, put forth in the following decade, that history and presence are subject to freeplay. Through the mechanics of computing—instantiated in the nonsensical narratives of Beckett’s *Trilogy* and the historical false narratives that circulated alongside them—history and reality emerged as malleable objects, continuously reconstructed in the present through the manipulation of a signifying system. Deriving an objective account of reality from such systems required either reducing noise, by comparing the variants between different streams of information (as do the Lamberts when they wirelessly spy on Sapo or the bureaucracy of the Dreyfus Affair), or abandoning the search for objective truth altogether: “there are two heterogeneous ways of erasing the difference between the signifier and the signified: one, the classic way, consists in reducing or deriving the signifier, that is to say, ultimately in *submitting* the sign to thought; the other, the one we are using here against the first one, consists in putting into question the system in which the preceding reduction functioned: first and foremost, the opposition between the sensible and the intelligible.” (Derrida 281) Whereas the cryptanalysis of Betchley Park chose the former route—deriving reality from symbolic manipulation—Beckett’s *Unnamable* proceeds instead through the latter—cycling through an infinite variation of codes and ciphers whose meaning, values, or signification, is ultimately unknowable—or, as Derrida writes: “The absence of the transcendental signified extends the domain and the interplay of signification *ad*

infinitum.” (280) Beckett historicizes Derrida’s theory at the same time as Derrida theorizes Beckett’s historicity, anchoring the entry of freeplay into the concept of the structure in the material, mechanical freeplay of language enabled by the pinwheel rotors of Enigma and bombe, mechanisms whose specters live on in the American corporation, the academy, and today’s ubiquitous computing industries.

Such entanglements of ideology, form, and computation are evoked in the very status of *The Unnamable*, itself the ontologically unstable protagonist of the novel and the title of the novel being written. Whereas Marcel Proust’s implied author is distinct from the novel he produces, *The Unnamable* directly invites the conflation of the book with the author-function that produced it. In other words, *The Unnamable*—as a character—is constructed through the writing procedures of *The Unnamable*—the novel—such procedures being, themselves a transduction of the apparatuses of wartime codebreaking and code making. In the words of Louis Althusser: “It therefore appears that the subject acts insofar as he is acted by the following system (set out in the order of its real determination): ideology existing in a material ideological apparatus, prescribing material practices governed by a material ritual, which practices exist in the material actions of a subject acting in all consciousness according to his belief.” (216) Althusser’s “material ritual” is Beckett’s “habit,” an automatic series of actions or procedures that update one’s stored sequences of information, often of self, other, and setting (such procedures live on in contemporary operating systems as daemons, background processes that maintain system functionality without input from the user). Like Molloy being interpellated by the hail of the sergeant, immediately constructing Molloy as under suspicion and the sergeant as his interrogator, so too do the unfettered mechanisms of

cryptanalysis call The Unnamable into existence. The unclear identity of The Unnamable and the uncertain realities and histories it writes therefore find their agency not in a human or author, but instead in the mechanisms of encryption—themselves used historically to turn individuals into cryptic constructs and reality into a falsifiable object: “it is not their real conditions of existence, their real world, that ‘men’ ‘represent to themselves’ in ideology, but above all it is their relation to those conditions of existence which is represented to them there. It is this relation which is at the centre of every ideological representation of the real world.” (214) This Unnameable existence or consciousness emerges through the theoretical turn in the academy simultaneously as it figured into the tangle of mechanics, military, and corporate research that produced the first digital computers. Such emergent afterlives of the document’s digital transformation (and its dominant narratives, as they circulated the institutional infrastructures of postwar America) can be traced, in part, to the formal mechanics of Beckett’s writing. The closing lines of Derrida’s “Structure, Sign and Play in the Discourse of the Human Sciences” directly echo the Unnamable as an ideological construct; Derrida concludes:

Here there is a sort of question, call it historical, of which we are only glimpsing today the *conception, the formation, the gestation, the labor*. I employ these words, I admit with a glance toward those who, in a company from which I do not exclude myself, turn their eyes away in the face of the as yet unnamable which is proclaiming itself and which can do so, as is necessary whenever a birth is in the offing, only under the species of the non-species, in the formless, mute, infant, and terrifying form of monstrosity. (294)

While Derrida's evocation of "the as yet unnameable" evokes the frescoed enunciation of Beckett's narrator-function, it equally evokes a saying, a naming, of the unnameable that elides its historical status as fundamentally divorced from present consciousness, from the possibility of full enunciation. This impossibility of rendering sensible the historical consciousness referenced by the unnamable's speech is counterbalanced only by the editorial experience of attempting to derive a coherent truth from Beckett's index (an experiential engagement with the text that is cognate to the historical experiences that text describes). A few short months after the publication of *the Unnamable* in 1953, IBM released the first general purpose structured programming language, FORTRAN (derived from formula translation). By the time structured programming became a commonplace element of digital computing—following Edsger Dijkstra's indictment of FORTRAN's "GO TO" statement in 1968 (released two years after the presentation of Derrida's "Structure, Sign, and Play" and two years before Althusser's "Ideology and Ideological State Apparatuses"), Beckett had already written the digital into Being.

Notes

- ¹ Beckett addresses the reflexive nature of Proust's writing on the documentary politics of his day, indicating his explicit awareness of the extent to which Proust's writing implements its theory in linguistic and bibliographic practice: "He was incapable of recording surface. So that when he reads the such brilliant crowded reporting as the Goncourts' Journal, the only alternative to the conclusion that he is entirely wanting in the precious journalistic talent is the supposition that between the banality of life and the magic of literature there is a great gulf fixed. Either he is devoid of talent or art of reality. And he described the radiographical quality of his observation. The copiable he does not see, He searches for a relation, a common factor, substrate. Thus he is less interested in what is said than in the way in which it is said." (63)
- ² The Trilogy is constructed as a Proustian index or memex from the opening pages of *Molloy*, *Malone Dies*, and *The Unnamable*. Paying homage to the narratology of Proust's *Recherche*, Beckett begins each novel by describing the implied author as he writes in the pages of his exercise book—Molloy writes his story from his mother's

house, Moran records the events of his attempts to track Molloy in his field report, and so on. Malone in particular occupies a startlingly similar writing situation to the Proust of *la Recherche*, composing the entire novel from his bed. James Reid affirms: “Three of the trilogy’s narrators—Molloy, Moran, and Malone—write in their respective bedrooms and two write in bed, the privileged places of Proust’s narrator’s meditation of first-person narration. The narrator of the last volume, *The Unnamable*, speaks from a linguistic recuse, the pronoun “I,” that tried to close itself off from any representation of a real world or self, just as Proust tried to close off his bedroom with cork from the world outside it. One narrator, Molloy, writes in a bedroom of his mother’s house, as does Proust’s narrator when he begins writing at the end of the *Recherche*. Ironically, Molloy even writes in his mother’s bed. The trilogy’s narrators are increasingly ill and nearing death, as is Proust’s writing narrator.” (9)

- ³ Reid writes: “For both Zurbrugg and Acheson, the literary historical relationship between Proust and Beckett takes the form of a linear transformation of the Proustian first-person narrator, who says he has a self to express, into the Beckettian narrator, who says that he has no self to express. The ‘Beckettian’ narrator in this formulation tells stories about himself as a means of diverting himself from the painful knowledge of the absence of a self.” (3)
- ⁴ Eric Smithner complements Beckett’s interpretation of Proust through his concept of the “poupée intérieure” or “internal doll.” For more, see Smithner, Eric. “Les Poupées Intérieures de Marcel Proust.” *The French Review*. 32.6 (1959): 520-526.
- ⁵ Although unaware of Proust’s compositional practices, Beckett shows a keen awareness of Proust’s experimental aim to write time: For Proust the object may be a living symbol, but a symbol of itself. The symbolism of Baudelaire has become the *autosymbolism* of Proust. Proust’s point of departure might be situated in Symbolism, or on its outskirts... He solicits no fact, and he chisels no Cellinesque pommels. He recedes from the Symbolists—back towards Hugo. And for that reason he is a solitary and independent figure. The only contemporary in whom I can discern something of the same retrogressive tendency is Joris Karl Juysmans. But he loathed it in himself and repressed it... We are frequently reminded of this romantic strain in Proust. He is romantic in his substitution of affectivity for intelligence, in his opposition of the particular affective evidential state to all the subtleties of rational cross-reference, in his rejection of the Concept in favour of the Idea, in his skepticism before causality. Thus his purely logical—as opposed to his intuitive—explanations of a certain effect invariably bristle with alternatives. He is a Romantic in his anxiety to accomplish his mission, to be a good and faithful servant. He does not seek to evade the implications of his art such as it has been revealed to him. He will write as he has lived—in Time. (60-62)
- ⁶ Emilie Morin confirms that Beckett was explicitly aware of the role of sound reproduction in Proust and Roussel’s work. Of Beckett and Proust, Morin writes: “The mysteries of sound transmission are also evoked in his [Beckett’s] early essay *Proust* (1930), which displays an interest in voices without origin, which resonate as if speaking from beyond the grave, as Julie Campbell has argued.” (6) Elsewhere, Morin documents Beckett’s awareness of Roussel’s engagement with Edisonian sound, reading him as a

Surrealist: “The phonographic voice and its apparent connections to the dead also recur in the work of Surrealist precursors: Raymond Roussel, in particular, described a father’s attempt to recreate the voice of his dead daughter in *Locus Solus*, and a fabulous phonograph endowed with the ability to restore a whole civilization in *Impressions d’Afrique*. Beckett, familiar with Surrealist and proto-Surrealist writings, was well aware of their marginal position, particularly in 1930s Dublin (he recalled in 1936 an encounter with Brian Coffey bearing ‘A Raymond Roussel under his oxters.’)” (11)

⁷ For more on the concept of the enduring ephemeral, see Chun, Wendy Hui Kyong. “The Enduring Ephemeral, or the Future is a Memory.”

⁸ My use of the term “return” draws from its use in object-oriented programming, as the output of a function, arguing that Beckett’s narrator-function (*The Unnamable*) works through the apparatuses of early humanities computing.

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Processing Modernism: The Textual Politics of *Nightwood*

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In the typescript of Djuna Barnes's *Nightwood*, T. S. Eliot replaces the word "obscene" with "unclean." Eliot alters Barnes's description of Nora's dog as "barking in a fit of laughter, obscene and touching" to read "unclean and touching." This editorial change on the part of Eliot does not appear in the published editions of the novel. Beside Eliot's change on the typescript, Barnes has written: "Sample of T.S. Eliot's lack of 'imagination' (as he said)" (Plumb 210). This brief editorial conversation between Barnes and Eliot is an instance of the networks of literary production that enabled the making of modernist literature. The rise of publishing in magazines and multiple editions, across different countries, publishers, and venues in the twentieth century enabled the proliferation and transformation of multiple versions of literary texts. The drafts and editorial changes that shaped the production of these texts, which often involved the collaboration of multiple editorial agents, also reveal telling histories about the changes that occurred to these texts over time. Sometimes these textual changes are as benign as Eliot's "unimaginative" shift from "obscene" to "unclean." In other cases, these changes reveal controversial material that was cut from an early draft and other details that

significantly alter the issues at stake in the work. In the instance of *Nightwood*, a novel known for its representation of lesbian desire in interwar Paris, typescript changes to the novel reveal sets of editorial decisions that fundamentally change the novel's description of queer identity. These editorial changes can be made viewable through the practices of electronic textual editing.

The rise of digital scholarship in the humanities presents new opportunities for representing the publication histories of modernist texts and for distributing them online. As electronic texts, images, and editions are used to share manuscript materials, including the creation of online archives and versioned electronic texts, and as many modernist texts begin to enter into the public domain, the scholarly representation of modernist literary production is moving increasingly into digital space. Just as modernist texts carry material histories embedded in specific networks of literary production, the digital counterparts used to represent those texts carry their own material histories that are embedded in contemporary networks of electronic production.¹ In much the same way that printed texts exist as historical products of editorial agents, publishing processes, and networks of textual transmission, digital texts are formed by the complex interrelation of component objects, tools, and collaborative laborers. Electronic textual editing can therefore be theorized as a practice through which contemporary methods and networks produce scholarly content that considers, reflexively, the historical methods and networks of modernist production. Through the concept of processing modernism, I explore how the computational processing deployed to produce electronic scholarly texts reengages the processes of composition and revision being represented onscreen. This approach takes up Katherine Hayles's argument that cultural, political, and theoretical issues do not

crystallize in one stable, authoritative instantiation of a text, but instead migrate and change across platforms and media; as she writes: “Since no print books can be completely encoded into digital media, we should think about correspondences rather than ontologies, entraining processes rather than isolated objects, and codes moving in coordinated fashion across representational media rather than mapping one object onto another.”² (270) Processing modernism refers at once to the theoretical and cultural issues that emerge throughout the editorial process of a work’s production and also to the digital processes through which such issues are constructed on screen.

Taking editorial revisions to Djuna Barnes’s *Nightwood* as its case study, I therefore re-locate modernist production within contemporary debates surrounding digital production in the academy. *Nightwood* is a novel that deals heavily with the question of queer desire. Locating instances of desire as layered representations that exist across multiple instantiations of the text reveals a hidden politics of the work. The novel’s representation of queer sexuality is processed across the typescript revisions used to produce the first published edition of the novel, for which significant revisions to the representation of homosexuality were introduced by the editorial oversight of T.S. Eliot, Frank Morley, Emily Coleman, and Barnes, herself. Examining these revisions reveals a hidden sexual politics of the work, a politics which is first embedded in the material history of the book and then reconfigured through the process of digitization. As it deploys electronic textual editing to reveal the sexual politics of *Nightwood’s* textual genesis, this chapter simultaneously interrogates how and where those politics continue to play out through the electronic genesis of digitized, collated versions of the novel’s typescript changes.

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<div class="Introduction" id="Processing Modernism">

Understanding modernist texts (both in their original and electronic forms) as politicized by their component materials requires reading the literary artifact through its processes of production. Processing modernist texts for electronic representation involves a series of contributing agents, including text encoders, web developers, and project directors. Similarly, the rendering of electronic texts on a computer screen relies upon processes of collating and integrating multiple files and sources which constitute the networked, component parts of the digital text. As Matthew Kirschenbaum explains: "What appears to be a homogenous digital object at the conceptual level...may in fact be a compound object at its logical and even physical levels, with elements of the database drawn from different file systems distributed across multiple servers or social media" (Kirschenbaum 3-4). As it exists in networked environments, the electronic literary object depends on the interrelation of various technological mechanisms, mechanisms which reveal material networks of scholarly production. Kirschenbaum continues:

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```

trary and self-consistent/self-contained. A simple example is a digital image file. An image file is typically considered to consist of nothing but information about the image itself—the composition of its pixelated bitmap, essentially. However, the image can carry metadata (documentation as to how it was

internal architecture, as well as what Manovich sees as the interface between computational architecture and its various cultural “layers”). See his *The Language of New Media* (Cambridge: MIT Press, 2001), 27–48.

21. John von Neumann, “General and Logical Theory of Automata,” in *Collected Works*, volume 5: *Design of Computers, Theory of Automata and Numerical Analysis*, ed. A. H. Taub (Oxford: Pergamon Press, 1963), 288–328.

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created, embedded as plain text in the file's header), as well as more colorful freight, such as a steganographic image or a digital watermark. This content will only become visible when the data object is subjected to the appropriate formal processes, which is to say when the appropriate software environment is invoked—anything from the “Show Header” function of an off-the-shelf image viewer to a 128-bit encryption key. At this point one layer of the digital object is artificially naturalized in its relation to the other, typically the original image which suddenly manifests extra, hidden, or special data. Formal

Underlying scholarly acts of representation online exist networked material infrastructures that support those acts of representation. Through Kirschenbaum's

distinction between formal and forensic materiality, the material components of academic production online can be read as analogous to their modernist counterparts, counterparts which are both represented and remediated as they pass through contemporary networks of digital production. In the instance above, the formal materiality of the image refers to its unbroken representation onscreen, eliding its status as material bits of data that are produced, hosted on servers, downloaded across telecommunications infrastructures, and compiled by a web browser. The forensic materiality of the digital object refers to its material existence on a Google Server (after being scanned and OCRed—processed—for digital representation), from which I accessed an instantiation of Kirschenbaum's book.³ Just as a genetic approach renders visible the material details that inform the production of modernist texts, forensic materiality exposes the material histories of the digitized text. Using this approach, I conceive both modernist literary representation and the scholarly representation of modernist texts as acts whose material histories politicize the representations of the literary objects that rely upon them. My deployment of process as both a modernist and a scholarly act of textual representation seeks to address expansions to the modernist canon by revisiting the representation of modernism, itself as a scholarly act that intervenes in the politics of modernist literary production.

Reading literary representation through its materials of production relies on a hermeneutics that locates the formal materiality of the literary text (the image) as a product that elides the politics of its modes of production (its process). Electronic scholarly texts seek to reveal the material histories of the literary artifact by digitizing drafts, manuscripts, and published editions. However, in the process of rendering textual change visible, electronic scholarly work exposes the material histories of the literary

object by suppressing the material histories of the digital artifact that come to stand in for it onscreen. The process of representing textual change online therefore reactivates the politics of literary production, requiring a hermeneutics that accounts for the component materials of both the analogue literary artifact and its digitized electronic counterpart. In order to read the forensic materiality of texts through their formal materials, I rely on what Bill Brown calls a materialist hermeneutic. This hermeneutic recuperates the suppressed politics of the literary artifact through its materials of production, locating the artifact as embedded in what Brown refers to as a material unconscious:

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    <dc:title>The Material Unconscious: American Amusement, Stephen Crane, and
the Economies of Play</dc:title>
    <dc:author>Bill Brown</dc:author>
    <dc:rights>Harvard University Press</dc:rights>
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    </dc:subject>
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Finally, I have formulated a notion of the “material unconscious” as a way of explaining how my account of Stephen Crane and my account of the American 1890s have come to seem indistinguishable. Most simply, the “material unconscious” names literature’s repository of disparate and fragmentary, unevenly developed, even contradictory images of the material everyday. It demonstrates the pressure that such materiality (e.g., the material production, reproduction, and consumption of sport) exerts on literary texts. And it demonstrates the formalizing pressure those texts exert on the heterogeneity of lived life. A materialist hermeneutic seeks to retrieve those images not as the historical context that explains (away) the idiosyncratic details of the literary artifact but as a historical text that relations between such details allow us to write. The archival/archaeological task, as I understand it, consists of developing a chain of associations that

Copyrighted material

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seem, retrospectively, to have converged already in the literary work. The analytical task consists in representing that convergence as an image that freshly elucidates the signifying structures and material changes of everyday life—the task, in other words, of producing the history that lingers within neglected images, institutions, and objects. Much of the point amounts to understanding how literature helps us to understand the unconscious as material history and history as the unconscious, as the necessarily repressed that can be rendered visible in sites of contradiction or incomplete elision. Leaving such sites unexplored amounts to recirculating the dominant cultural memory.

Through Brown’s materialist hermeneutic, the formal literary artifact emerges as a representation, an image, whose suppressed material components expose its status as the product of a historical politics. Whereas Brown deploys the material unconscious through a historiographic focus on the everyday, wherein neglected things reveal the suppressed politics of late nineteenth century recreation, I read the material unconscious of the book through its suppressed drafts, typescripts, and editorial changes. It is through the variants

between these witnesses, the “sites of [textual] contradiction or incomplete elision,” that the repressed forensic components of the formal literary artifact emerge.

The point of this approach is not to read editorial revision as an expression of an editor’s politics; I do not intend to make an argument about the unconscious intentions of *Nightwood’s* editors. Reading the material unconscious of the book does not seek to psychologize the literary artifact either. Instead, subjecting textual representation to a materialist hermeneutic dredges up the hidden base materials that inform its literary representations. The material unconscious of the electronic literary artifact exposes the elided politics of the historical texts that inform its representation, but which inhere in the production of that representation rather than within the representation itself. In the case of *Nightwood*, the representation of sexuality in the first published edition of the novel exists as the product of editorial changes which modified the novel’s construction of queer identity. Exposing these changes through a hermeneutic that focuses on the drafts and typescripts across which the representation of sexuality was changed therefore unveils a changing and complex engagement with the question of queer sexuality. The material unconscious of *Nightwood’s* representation of sexuality inheres its struggle to describe and define how sexuality functions for its queer characters, particularly in relation to changing constructions of queerness in the first half of the twentieth century. The textual materials that underpin *Nightwood’s* representation of sexuality expose the novel’s invisible grappling with the question of queer identity. Furthermore, the process of exposing the material unconscious of the literary artifact by rendering its variant drafts and typescripts visible onscreen generates a series of digital objects that reactivate and rework the unconscious of their analogue referents. Whereas Brown deploys a materialist

hermeneutic to reveal the repressed materials of the literary artifact, I argue that the use of this hermeneutic to generate electronic scholarly representations of textual change overturns the distinction between the historical text and the digital text. As it exposes and reengages the invisible politics of the literary artifact, the digitized text exists as a layered archival object through which the process of scholarly representation reveals, but also remediates, the material unconscious of the literary text.⁴ My inquiry into the politics of the publication history of *Nightwood* is thus simultaneously an inquiry into the politics of rendering that history viewable onscreen.

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<div class="Processing *Nightwood*" id="Sexual Identities">

Composed across multiple drafts, followed by three copies of the typescript, the published text of *Nightwood* is invisibly marked by the editorial hands of Emily Coleman, T.S. Eliot (who collaborated with his colleague Frank Morley), and Barnes herself. Coleman collaborated with Barnes throughout the novel's long process of composition, including multiple early versions that were sent to various publishers and rejected. It was not until Coleman contacted T.S. Eliot, persuading him to look over the manuscript, which he did in collaboration with Frank Morley, that publication became possible. With the editorial guidance of Eliot and Morley, Barnes published the novel at Faber and Faber. Three copies of the typescript used in this process of revision exist: the ribbon copy, the first carbon copy (sent first to Coleman, and then to Eliot and Morley), and the second carbon copy (which Barnes kept). Notable changes throughout this process include the removal of a character named Catherine, who was merged with Nora

(this took place over the novel's early drafts, before the introduction of Eliot) and the excision of significant references to male homosexuality (occurring across the copies of the typescript). Cheryl J. Plumb takes the second carbon (the one which Barnes kept) as the copy text for her scholarly edition of the novel, which restores the vast majority of cuts made for the 1936 first edition, published by Faber & Faber. Although my goal is not to ascribe intention to these changes, which are often attributed to the blue pen of Eliot, I do interrogate how the process of editorial revision changes the representation of sexuality in Barnes's novel. By examining the process of revision of the novel, peeling back the forensic layers that reveal the novel's material history, a material unconscious of the text's engagement with sexuality surfaces on page and screen alike.

As *Nightwood's* thematics unveil the invisible, unexamined underside of queer desire, so too does its publication history expose the suppressed question of queer identity that is processed out of the published edition. These changes center mainly on the Doctor's status as "inverted." The published edition of the text creates ambiguity surrounding the sexual identification of the Doctor, who appears to be, at moments, a crossdresser and, at others, transgender. As he tells Nora in "Go Down, Matthew": "I call her [god] 'she' because of the way she made me; it somehow balances the mistake.' He got up and crossed to the window" (Barnes 159). Similarly, in "Watchman, what of the Night!" the Doctor laments: "am I to blame if I've turned up this time as I shouldn't have been, when it was a high soprano I wanted, and deep corn curls to my bum, with a womb as big as the king's kettle, and a bosom as high as the bowsprit of a fishing schooner?" (97) The doctor then goes on to discuss his experience finding men in the *pissotières*

(public toilets which often served as places of sexual activity for French gay men in early twentieth century Paris) at night.

The doctor's description of his sexuality, coupled with his acts of transvestitism, blur the distinction between homosexuality and transgender identification. The lack of overt references to the doctor's sexual acts do not help. This ambiguity surrounding the doctor's identity generates a slippage between sex and gender, since it remains unclear whether the doctor is expressing his status as transgender or articulating his sexuality through the discourse of inversion. "Inversion" as a concept used to understand homosexuality in the early twentieth century, read homosexual identity as an inversion of sexual characteristics: a homosexual man was understood as a heterosexual woman placed within a male body, and a homosexual woman was the inverse. However, since the doctor never explicitly identifies as homosexual, and never explicitly identifies his sex characteristics, the status of his sexuality hovers in an indeterminate realm where the bar of signification delineating sex and gender remains suspended indefinitely. Although the doctor desires men, the gender identification accompanying that desire remains ambiguous.

Through the doctor's indeterminate sexuality, the novel therefore suspends the historical (gendered) management of female bodies and reproduction (associated with heterosexuality) in a state of irony. The man who manages the reproducing bodies of the novel is not quite male, his only practice as a doctor is to provide abortions, and the children he helps birth carry equally indeterminate identities (Guido appears to have no sexual desire). The doctor's ambiguous sexuality also complicates his relationship to the novel's central triangle of desire, as it disrupts essentialized constructions of femininity

that may be coded onto Robin's queer relationships. Although the doctor desires men, the gender identification accompanying that desire remains ambiguous; the doctor's identity therefore demands that the reader not collapse Robin, Nora, and Jenny's sexual identities back onto singular, essentialized understandings of femininity (nor readings of female homosexuality as male heterosexuality in disguise). As the figure through whom the physical and sexual identities of Barnes's queer bodies are routed, the doctor's ambiguous identity opens an indeterminate space in which the sexual dynamics of their relationships play out.

The representation of the doctor's indeterminate sexuality, which suspends essentialized readings of queer identity associated with the concept of inversion, is shaped by the process of textual revision. To borrow again from Kirschenbaum, the formal materiality of the doctor's queer body is constructed by the invisible forensic materiality of the text, through which changes to the representation of sexual identity are rendered viewable. These changes reveal the suppression of overt references to the Doctor's self-identified homosexuality, clearly aligning his sexual identity within the discourse of inversion. Plumb's version restores a variant in which the Doctor tells Jenny: "You see before you, madame...one who, in common parlance is called a 'faggot,' a 'fairy,' a 'queen.' I was created in anxiety" (Plumb 64-65). Further variants establish the doctor's sex characteristics as male. Variants surrounding "Tiny 'O'Toole," which refers to the doctor's genitals (obliquely in the published edition and explicitly in the original version), further reveal the Doctor's identity as inverted. In "Go Down, Matthew," The Doctor describes an episode in which he had prayed in a church as an attempt to confront his sexuality.

<p>“Kneeling in a dark corner, bending my head over and down, I spoke to Tiny O’Toole because it was his turn; I had tried everything else. There was nothing for it this time but to make him face the mystery so it could see him clear as it saw me. So then I whispered, ‘What is this thing, Lord?’ And I began to cry...I was crying and striking my left hand against the prie-dieu, and all the while Tiny O’Toole was lying in swoon. ..I’m not able to stay permanent unless you help me, O Book of Concealment! C’est le plaisir qui me bouleverse! The roaring lion goes forth, seeking his own fury! St tell me, what is permanent of me, me or him?”</p>	<p>“Kneeling in a dark corner, bending my head over and down, I took out Tiny O’Toole because it was his turn; I had tried everything else. There was nothing for it this time but to make him face the mystery so it could see him clear as it saw me. So then I whispered, ‘What is this thing, Lord?’ And I began to cry...I was crying and striking my left hand against the prie-dieu, and all the while Tiny O’Toole was lying in swoon. ..I’m not able to stay permanent unless you help me, O Book of Concealment! C’est le plaisir qui me bouleverse! The roaring lion goes forth, seeking his own fury! St tell me, what is permanent of me, me or him?”</p>
<p> Crossed out in red pen by Frank Morley. Barnes revised the language.</p>	
<p>FABER AND FABER TYPESCRIPT (FIRST)    </p>	

Changing “I spoke to Tiny O’Toole” to “I took out Tiny O’Toole” shifts the concreteness of the reference to the Doctor’s genitals. Whereas the figurative presence of Tiny hovers in the published text, the variant in the original version constructs Tiny not as an ambiguous, metaphorical referent to the doctor’s genitals, but a concrete referent to his male genitals (performed through the act of “taking out”). This shift in concreteness concordantly shifts the significance of the doctor’s anguish. The lines “What is this thing, Lord” and “what is permanent of me, me or him?” change with the changing status of Tiny O’Toole. In the presence of the ambiguous referent, the construction of the “thing” and the opposition between “me [and] him” expresses an ambiguous tension between the male and the female. In the presence of the clear referent, however, the doctor’s frustration with his male “thing” is clearly constructed through a tension between the doctor’s female gender and masculine sex, or, through the discourse of inversion. The

variant scenes thus provide variant readings of the doctor's sexual frustration. The original version embodies this pleasure in the doctor's male genitals, which like "the roaring lion goes forth." The published version similarly encodes the doctor's body with the language of masculine desire, but fails to provide any concrete indication of its physical characteristics, opening an ambiguous realm in the slippage between sex and gender.

The original version also restores a significantly more concrete, physical alignment of Tiny O'Toole with male homosexuality in "Bow Down." The doctor recounts:

...which brings me to the night I popped Tiny out to relieve him of his drinking, when something with dark hands closed over him as if to strangle the life's breath out of him and suddenly the other, less pleasing hand, the hand of the law, was on my shoulder and I was hurled into jail, into Marie Antoinette's very cell... We, the two blasphemed queens, she blasphemed twice, for wasn't it the rule in her day that an expecting queen should have to deliver herself amid all the rabble they call the royal suite? (26-27)

This scene, as it appears in the original version, clearly establishes Tiny as a metonymic identifier of the doctor's inverted identity toward the beginning of the novel. The doctor's self-alignment with Marie Antionette strengthens his self-identification as inverted. When considered in conjunction with each other, these twin variant scenes locate expressions of

the doctor's sexuality within topographic markers of state and religious power, in which his physical body—and the expression of his sexuality through corporeal attributes of that body—is managed by the authoritarian protocols of church and state. The doctor's sexuality therefore becomes a stress-point for grounding the representation of desire in the historical and political contexts of the modern city, as the prison and church operate as topographic metonyms of the power structures they embody. The two locations are also just beside each other geographically: the prison in which Marie Antionette was held (*Conciergerie*) and the church in which the Doctor prays (*St Merri*) are on opposite sides of *le Pont St Michel* (seperated by Châtelet). This historiographic correspondence is suppressed by the cuts made for the published edition of the novel.

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<div class="Processing *Nightwood*" id="Geographies of Desire">

The representation of sexual difference, as the doctor's homosexuality is made more ambiguous in the printed edition of the novel, recapitulates the process of textual difference. As it is constructed across the variant editions of *Nightwood*, the representation of male homosexuality (as the concept of inversion is de-emphasized with the excision of overtly homosexual content) emerges as a formal construction that is underpinned by the forensic materiality of the first published edition. In the process of revealing the suppressed underside of sexuality, *Nightwood*, itself unveils an invisible material unconscious of its processed text, an unconscious that grapples with the representation of queer sexuality as it is understood through binary, essentialized constructions of sex and gender. Subjecting the published edition of Barnes's novel to a

materialist hermeneutic, enacted by revealing its draft materials and enabled through the electronic representation of those materials, unearths a suppressed, unconscious engagement with the question of queer identity, an invisible politics of desire that lies buried in the base materials that compose the novel's publication history.

The material unconscious of *Nightwood's* representation of queer identity, and the politicization of that identity through historical constructions of sexuality and through the historiography of Paris, are further constructed through the acts of nighttime wandering that enact Matthew and Robin's queerness. Immediately following the scene where the doctor laments: "am I to blame if I've turned up this time as I should have been..." occurs an anecdote in which the doctor describes his experience of meeting men in the *pissotières* (the public toilets) at night.

“Jehovah, Sabaoth, Elohim, Eloi, Helion, Jodhevah, Shaddai! May God give us to dies in our own way! I haunt the pissoirs as naturally, as Highland Mary her cows down by the Dee—and by the Hobs of Hell, I’ve seen the same thing work in a girl looking for her woman, but I’ll bring that up later!...And do you think that those circular cottages have not brought me to great argument? Have you ever glanced at one when the night was well down, and seen it and what it looked like and resembled most, with its one coping and a hundred legs? A centipede. And you look down and choose your feet, and, then to one, you find a bird with a light wing, or an old duck with a wooden knee, or something that has been mournful for years. What? I’ve held arguments with others at long tables all night through about the particular merits of one district over another for such things, of one cottage over another for such things. And do you suppose I was agreed with, and had any one any other one’s ideas? There was as much disagreements as there might have been, had we all been selecting a new order of government. Jed would say North, and Jod would say South...and I said that the best port was at the  Place de la Bastille. Whereupon I was torn into parts by a hundred voices,—each of them pitched in a different arrondissement...I says, ‘sea level and atmospheric pressure and topography make all the difference in the world!’ My voice cracked on the word ‘difference,’ soaring up so divinely, and I said: ‘If you think certain things do not show from what district they come, yea, even to an arrondissement, then you are not out gunning for particular game, but simply any catch, and I’ll have nothing to do with you!’”

“Jehovah, Sabaoth, Elohim, Eloi, Helion, Jodhevah, Shaddai! May God give us to dies in our own way! I haunt the pissoirs as naturally, in search of my man, as Highland Mary her cows down by the Dee—and by the Hobs of Hell, I’ve seen the same thing work in a girl looking for her woman, but I’ll bring that up later!...And do you think that those circular cottages of delight have not brought me to great argument? Have you ever glanced at one when the night was well down, and seen it and what it looked like and resembled most, with its one coping and a hundred legs? A centipede. And you look down and choose your feet, and, then to one, you find that you have picked a bird with a light wing, or an old duck with a wooden knee, or something that has been mournful for years. What? I’ve held arguments with others at long tables all night through about the particular merits of one district over another for such things, of one cottage over another for such things. And do you suppose I was agreed with, and had any one any other one’s ideas? There was as much disagreements as there might have been, had we all been selecting a new order of government. Jed would say North, and Jod would say South...and I said that the best port was at the  Place de la Bastille. Whereupon I was torn into parts by a hundred voices,—each of them pitched in a different arrondissement...I says, ‘sea level and atmospheric pressure and topography make all the difference in the world!’ My voice cracked on the word ‘difference,’ soaring up so divinely, and I said: ‘If you think certain things do not show from what district they come, yea, even to an arrondissement, then you are not out gunning for particular game, but simply any catch, and I’ll have nothing to do with you!’”

 Located at the intersection of the 4th, 11th, and 12th arrondissements. A geographical marker of the French revolution.

NEW DIRECTIONS

ORIGINAL VERSION



As before, the formal representation of the doctor’s sexuality is processed by the forensic materiality of the versioned text, as the scene shifts in the original version to a more overt representation of nighttime cruising. The published text represents the doctor’s act of finding men in the *pissotières* as more passive, whereas the inclusion of searching and finding “circular cottages of delight” in the original version clearly establishes that the doctor is actively seeking men in the toilets at night. This versioned representation of the

doctor's inverted masculinity, as his "roaring lion goes forth," is simultaneously grounded in the mediative context of urban geography. The doctor's argument that "certain things...show from what district they come... [so]you are...gunning for particular game" suggests that different types of sexual partners are found in different areas of the city. Through the act of sexual classification, by which the cruiser classifies the social value of the object of desire he seeks, geography becomes a spatial medium for expressions of social and cultural distinction. As his voice cracks on the word "difference," the doctor emphasizes different permutations of social distinctions in the act of meeting in the *pissotières*, a difference which is grounded in the material geography of the city. The difference to which the doctor alludes is, perhaps unsurprisingly, also different from itself, as the doctor's own sexual interaction differs between the two texts, as his role becomes more predatory in the original version.

The textual and geographic difference in *Nightwood's* representation of the doctor's sexuality is also grounded in a changing historiography of Paris (as it politicizes the doctor's homosexuality). The doctor's preference for *La Place de La Bastille* again aligns his queer identity with the French revolution, a historicization and politicization of revolution that only exists in the original version of the text (in which the doctor also aligns himself with Marie Antoinette in the *Conciergerie* prison). The doctor identifies the expression of his sexuality with the geographic figure of overcoming oppression (*La Bastille*) and the restriction of his sexual expression with another geographic figure of revolution (*Conciergerie*). The free expression of the doctor's sexuality is therefore associated, through the history of Paris (as it recalls the historical event of the French Revolution), with the political act of revolt. This historical and political valence of the

doctor's inversion is edited out of the printed text, only rendered viewable by processing the forensic material that underlies *Nightwood's* formal features. Doing so reveals a changing politics of queer representation, as the discourse of inversion is initially used to invoke a revolutionary expression of marginalized desire, one that sees queer identity as a reaction to heterosexuality (rather than an ambiguous construction that hopelessly frustrates dominant constructions of sex and gender). This representation of queerness is then excised to precisely undercut the essentialized constructions of sex and gender upon which its bold and reactionary expression of homosexuality relies.

Furthermore, the changing representation of the doctor concordantly changes the status of the other queer characters in the novel. Matthew exists as a figure through whom the queer identities of Robin, Nora, and Jenny are routed. He serves not only as the narrative intermediary between them, who recounts their sexual encounters, but also as a figure who manages their bodily identities. His status as queer doctor, whose understanding of sexuality encodes the identities of the female bodies he manages as both confidant and abortionist, locates Matthew as a central character through whom female queerness is refracted. Matthew's status as doctor hinges upon his exterior identification as male. Reading that identification through the discourse of inversion alters the doctor's interaction with the women in the novel, constructing "Watchman, What of the Night!" as a scene in which the masculine Nora seeks advice about women from the feminine Matthew. Representing the doctor's homosexuality through the discourse of inversion, particularly as it is grounded in the relationship between sexuality and geography, alters the queer identities of the novel's female characters, as their identities pivot around that of the figure who manages (both literally and figuratively) Barnes's female bodies.

The doctor's sexuality further exists as a point around which the identification of Robin and Nora's queer relationship pivots. The sexual identities of Barnes's queer characters operate through distinct modes of geographic traversal, making spatial experience an embodied act through which desire is unfolded and enacted. Robin's somnambulism, which causes her to wander the streets at night and meet strange women, *inverts* the doctor's act of nighttime cruising; whereas the Doctor meets men in the confined space of the Bastille toilets, Robin seeks strangers in the open streets and cafés of the Latin Quarter. The doctor's sexual anonymity is encased and enclosed within the walls of the *pissotière*. Robin's anonymity is elusive and expansive, dispersed across the stream of Latin Quarter nightlife. The discourse of inversion suggests that Robin's nighttime wanderings are the unconscious manifestations of her inverted masculinity, a masculinity which seeks gratification through predatory acts of sexual engagement at night. In this context, Robin's impulsion seek out new partners becomes coded as the surfacing of her repressed interiorized masculinity.

...without knowing she would do so, [Robin] took the turn that brought her into this particular street...[and Nora] looking at every couple as they passed, into every carriage and car, up to the lighted windows of the houses...trying to discover not Robin any longer, but traces of Robin, influences in her life. (Barnes 63-64)

Through the concept of inversion, as it constructs queer identity in the original version, Robin and Nora's spatialized sexualities represent queerness as dependent upon heterosexual categories of romantic interaction. As men trapped in women's bodies, Robin involuntary seeks female prey (whereas the doctor voluntarily seeks male prey),

and Nora attempts to reconstruct her desire for Robin through the spatial act of voyeuristically observing heterosexual couples on the street. The removal of inversion as structuring queer identity in the printed version disrupts fixed, essentialized readings of queer desire: the linkage between Robin and Nora's wanderings now exists along a slippery spectrum of gender identification, in which the sexualities at stake do not exist in opposition to, but rather in the shadow of, the hegemonic gender constructions that hang over them. Rather than being a figure whose identity determines how the reader locates, isolates, and contains the marginalized sexualities of his female confidantes, the doctor rather operates as a figure who troubles any fixed understandings of queer identity in the first edition of the novel. A controversial construction of queer desire hovers beneath the formal surface of Barnes's *Nightwood*, one that relies on the historical concept of inversion in order to define the categories of queer sexuality. It is only by revealing the invisible underside of that representative framework, much like *Nightwood*, itself reveals the suppressed sides of sexuality, that the electronic text reveals the novel's editorial process as one embroiled in the changing twentieth-century politics of desire.

<div class="Processing *Nightwood*" id="Representation as Politics">

The material unconscious of *Nightwood*'s representation of queer identity, and the politicization of that identity through historical and spatial constructions of sexuality, is further processed into the novel's final scene. Here, Robin's sexuality engages with the unleashed, animal figure of Nora's dog, culminating in a violent, playful, and above all ambiguous conclusion. Nora's uncertain relationship to the dog, as their encounter hovers in an indeterminate space between violence and playfulness, between aggression and arousal, creates a shocking and defamiliarizing conclusion that leaves the raw expression

of Robin's sexuality in a state of defamiliarization and irresolution. Through its tactics of narrative ambiguity, the conclusion thus performs the uncertainty and the power of Robin's sexuality. However, the performative ambiguity of the denouement exists as the product of a series of editorial modifications that significantly altered the novel's ending. As the final scene is processed across the three copies of the typescript, the defamiliarizing effects of the passage are reduced, along with the inclusion of more explicit sexual parallels between Robin and the dog.

Faber and Faber	Typescript (All)	Typescript (Selected)
<p>On a contrived alter, before a Madonna, two candles were burning. Their light fell across the floor and the dusty benches. Before the image lay flowers and toys. Standing before them in the boy's trousers was Robin. Her pose, startled and broken, was caught at he point where her hand had reached almost to the shoulder, and at the moment Nora's body struck the wood, Robin began going down, down, her hair swinging, her arms out. The dog stood rearing back, his forelegs slanting, his paws trembling under the trembling of his rump, his hackle standing, his mouth open, the tongue slung sideways over his sharp bright teeth, whining and waiting. And down she went, until her head swung against his, on all fours now, dragging her knees. The veins stood out in her neck, under her ears, swelled in her arms, and wide and throbbing, rose up on her hands as she moved forward.</p> <p>The dog, quivering in every muscle, sprang back, his tongue a stiff curving terror in his mouth; moved backward, back, as she came on, whimpering too, coming forward, her head turned completely sideways, grinning and whimpering. Backed into the farthest corner, the dog reared as if to avoid something that troubled him to such agony that he seemed to be rising from the floor; then he stopped, clawing sideways at the wall, his forepaws lifted and sliding. Then head down, dragging her forelocks in the dust, she struck against his side. He let loose one howl of misery and bit at her, dashing about her, barking, and as he sprang on either side of her he always kept his head toward her, dashing his rump now this side, now that, of the wall.</p> <p>Then she began to bark also, crawling after him—barking in a fit of laughter, obscene and touching. Crouching, the dog began to run with her, head-on with her head, as if to circumvent her; soft and slow his feet went passing. He ran this way and that, low down in his throat crying, and she grinning and crying with him; crying in shorter and shorter spaces, moving head to head, until she gave up, lying out, her hands beside her, her face turned and weeping; and the dog too gave up then, and lay down, eyes bloodshot, his head flat along her knees.</p>	<p>On a contrived alter, before a Madonna, two candles were burning. Their light fell across the floor and the dusty benches. Before the image lay flowers and toys. Standing before them in the boy's trousers was Robin. Her pose, startled and broken, was caught at he point where her hand had reached almost to the shoulder, and at the moment Nora's body struck the wood, Robin began going down. Sliding down she went; down, her hair swinging, her arms held out. The dog stood rearing back, his forelegs slanting, his paws trembling under the trembling of his rump, his hackle standing, his mouth open, the tongue slung sideways over his sharp bright teeth, whining and waiting. And down she went, until her head swung against his, on all fours now, dragging her knees. The veins stood out in her neck, under her ears, swelled in her arms, and wide and throbbing, rose up on her hands as she moved forward. "Where?" she whispered. "Where?" "Where?"</p> <p>The dog, quivering in every muscle, sprang back, his tongue a stiff curving terror in his mouth; moved backward, back, as she came on, whimpering too, coming forward, her head turned completely sideways, grinning and whimpering. Backed into the farthest corner, the dog reared as if to avoid something that troubled him to such agony that he seemed to be rising from the floor; then he stopped, clawing sideways at the wall, his forepaws lifted and sliding. Then head down, dragging her forelocks in the dust, she struck against his side. He let loose one howl of misery and bit at her, dashing about her, barking, and as he sprang on either side of her he always kept his head toward her, dashing his rump now this side, now that, of the wall.</p> <p>Then she began to bark also, crawling after him—barking in a fit of laughter, obscene and touching. Crouching, the dog began to run with her, head-on with her head, as if to circumvent her; soft and slow his feet went passing. He ran this way and that, low down in his throat crying, and she grinning and crying with him; crying in shorter and shorter spaces, moving head to head, until she gave up, lying out, her hands beside her, her face turned and weeping; and the dog too gave up then, and lay down, head flat along her knees, his eyes bloodshot, and waiting.</p>	<p>On a contrived alter, before a Madonna, two candles were burning. Their light fell across the floor and the dusty benches. Before the image lay flowers and toys. Standing before them in the boy's trousers was Robin. Her pose, startled and broken, was caught at he point where her hand had reached almost to the shoulder, and at the moment Nora's body struck the wood, Robin began going down, down, her hair swinging, her arms out. and the dog, the model of what she was about and the terror of what she was to do, stood there, his forelegs slanting, his paws trembling under the trembling of his rump, his hackle standing, his mouth open, the tongue slung sideways over his sharp bright teeth, whining and waiting. And down she went, until her head swung against his, on all fours now, dragging her knees. The veins stood out in her neck, under her ears, swelled in her arms, and wide and throbbing, rose up on her hands as she moved forward. "Where?" she whispered. "Where?" "Where?"</p> <p>The dog, quivering in every muscle, sprang back, his tongue a stiff curving terror in his mouth; moved backward, back, as she came on, whimpering too, coming forward, her head turned completely sideways, grinning and whimpering. Backed into the farthest corner, the dog reared as if to avoid something that troubled him to such agony that he seemed to be rising from the floor; then he stopped, clawing sideways at the wall, his forepaws lifted and sliding, looking at her, striking against the wall, like a little horse; like something imploring a bird, a mistress. Then head down, dragging her forelocks in the dust, she struck against his side. He let loose one howl of misery and bit at her, dashing about her, barking, and as he sprang on either side of her he always kept his head toward her, dashing his rump now this side, now that, of the wall.</p> <p>Then she began to bark also, crawling after him—barking in a fit of laughter, obscene and touching. Crouching, the dog began to run with her, head-on with her head, as if to slowly and surely circumvent her; soft and slow his feet went passing. He ran this way and that, low down in his throat crying, and she grinning and crying with him; crying in shorter and shorter spaces, moving head to head, until she gave up, lying out, her hands beside her, her face turned and weeping; and the dog too gave up then, and lay down, eyes bloodshot, his head flat along her knees.</p>
BACK		
BER AND FABER	TYPESCRIPT (ALL)	TYPESCRIPT (SELECTED)

View online at axchristie.github.io/EMMA-ITEM/modvers/barnes3.html

The novel's ambiguous conclusion can be read as an editorial response to the more explicit sexual connections between Robin and the dog that exist in earlier versions of the text. Content removed from the typescript explicitly links Robin's sexuality to the animal image of the dog that proceeds that variant in the text. The phrase "the dog, the model of what she was about and the terror of what she was to do" connects Robin to the description of the dog, "his forelegs slanting...his hackles standing, his mouth open, the tongue slung sideways over his sharp bright teeth," that follows. The connection between Robin's repressed sexual energy and the dog's masculine wildness draws, again, from the discourse of inversion, by suggesting a continuity between Robin's suppressed sexual vitality and the dog's savage masculinity. Further variants in the second carbon reinforce the sexual link between Robin and the dog, including the description of the dog "like something imploring a bird, a mistress [Robin]" and, most prominently, inclusion of the words "and waiting" in the final sentence. The image of the dog, who has implored Robin like a bird or a mistress, lying across her knees in waiting adds an explicitly sexual register to the final scene. The inclusion of Robin's question to the dog: "'Where?' 'Where?'" continue to characterize the scene as a playful, sexualized act. The violence and the ambiguity of the novel's final scene, particularly as it enacts the unleashing of Robin's suppressed sexuality, houses an unconscious engagement with the sexualized description of masculine prowess, which lies interred in the editorial materials (running parallel to Robin's suppressed sexual vitality) that underpin the scene.

The above materialist reading of the changing representation of Robin's sexuality, as it is facilitated by the machine act of processing and displaying the variant versions of the conclusion, is also deeply problematic. The parsing acts of JSON and XML-TEI

processing, used to generate the interface that layers the variant versions of the scene beside each other, constructs a continuity between fundamentally incompatible representations of sexuality (inversion and sexual ambiguity). TEI encoding, highlighting connected variants with Javascript and CSS, and layering the three versions of *Nightwood's* conclusion beside each other in an html file, does not simply represent the way queer sexuality is represented in the novel. Instead, processing Barnes's text intervenes in the representation of queer identity (reactivating Barnes's modernist process of composition through the computational process of digitization).

The interface used to process *Nightwood* positions sexual inversion as a direct antecedent to the sexual ambiguity that is represented in the published text, rather than seeing it as a historical concept from which sexual ambiguity makes a discontinuous break. The logic of parallel segmentation holds as a structural cognate for the discourse of inversion, in which gender and sexuality always exist as paired opposites of each other. But this logic cannot hold when gender and sex are irreconcilably of indeterminate categories, as entities whose unknowable relationship fundamentally upsets the very act of description and classification that would enable their neat identification in the first place. The logic of sexual ambiguity is self-defeating: because sex and gender cannot be defined in relation to each other, these terms cannot carry any singular (let alone oppositional) definition on their own. The interface used to represent the process of constructing the published text of *Nightwood* (generated through XML, javascript, JSON, css, and html, and then rendered visible through the interface onscreen) actively reconstructs a historical narrative through which those representations change over time. But this narrative is fallacious, authored through the logic of the editing interface and,

itself, discontinuous from the very history it seeks to faithfully represent. The interface ironically uses the method of inversion to structure sexual ambiguity as another version of the historical binary between masculinity and femininity. Rather than expressing queerness as always already existing before binary constructions of sex and gender, the interface and encoding practices used to represent the changing sexual politics of the novel display non-essentialist constructions of homosexuality as a direct response to earlier essentialist constructions of queer identity. In revealing the material unconscious of Barnes's representation of an ambiguous queer sexual identity, the process of revealing textual change onscreen (re)constructs sexual ambiguity as simply another version in a continuous chain of representations of sex and gender. The XML-TEI locations and CSS highlights (background-color) used to connect the variants across the versions of the text generates the illusion of a historically unbroken representation. Rather than allowing us to understand *Nightwood's* final representation of queerness as a discontinuous break with its earlier investment in inversion, the process used to bring *Nightwood* into electronic space elides the fissures that exist across *Nightwood's* versions by connecting discontinuous representations of sexuality. The process of electronic textual editing used to represent *Nightwood's* changing representations of interwar queerness reveals the sexual history of Barnes's book; in so doing, it troubles the historical constructions of queer sexuality upon which the textual history at hand rests.

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<div class="Conclusion" id="Processing Modernism Anew">

Processing *Nightwood* does not recover the material unconscious of Barnes's text. Instead, it actively (re)constructs the text's engagement with queer identity as it re-presents the representations that exist across the original versions of the text. In this way, digitization reactivates and reworks the historical process of editorial intervention. The relationship between contemporary processes of electronic scholarship and the modernist processes of editorial intervention is not analogous; the scholarly act of re-presenting the modernist process of representing sexuality in *Nightwood* actively intervenes in the historical politics of the work.

Digitized representations of textual change disrupt the distinction between the historical text and the (online) archival text at the point where it intervenes in the politicized (re)production of the literary artifact. Underpinning the formal representation of the digital object lies the forensic materiality responsible for processing it, including a series of people, platforms, labor, and metadata, the material conditions of which are often rendered invisible onscreen. The digital modernist object layers two networks of material production, whose geographic, political, and institutional contexts make viewable their invisible politics. As Barnes's processed text represents the invisible underside of sexuality in interwar Paris, the processing of that text re-conducts the modernist representation of queer sexuality through contemporary circuits of institutional collaboration and production.

Reading processed texts in electronic environments therefore demands that the historical, literary artifact and its contemporary, electronic archival counterpart be read as layered objects of critical inquiry. Understanding how the process of electronic scholarship reconfigures the unconscious materials of the literary text fundamentally

alters the scope of textual scholarship in electronic environments. Processing modernism is not merely a method for re-presenting modernist modes of production online. Rather, it is an event through which scholarship reactivates, reconfigures, and reenacts the key issues at stake in modernist modes of literary production. To return to Bill Brown's deployment of the material unconscious:

national. By now we understand how the "historiographical operation" as such entails a complex set of literal dislocations, a set of transcriptions dislodging words from one context (the designated archive) and rearranging them in another (the text of "history").⁵ But we have really just begun to understand how our engagement with literature can produce an alternative space of elaboration wherein ephemera that have yet to attain historicity might be assigned significance within—or alongside—the master narratives of, for instance, American realism, American modernity, and American modernism.

Whereas Brown locates the material unconscious by dislodging the archival text from the historical text, or rather by repositioning the archival text within the material contexts of its historical moment, I locate the space of the electronic archive (and more specifically the process of electronic textual scholarship) as a site that works through the material unconscious of the historical text as its bibliographic materials are re-politicized by the electronic processes that enact their digital transformation.

If we are to understand processing modernism as a practice by which the component material properties of the literary object reveal the unconscious politics of that object, then processing becomes not only a computational method, but also a theoretical exercise in which scholars work through enduring conceptions of modernity and its objects. Processing modernism works with modernist literature through networks of

production, performatively undertaking the modernist enterprise with the literary representation of modernity as its object of inquiry. Rather than being passive acts of explanation and representation, instances of electronic textual scholarship actively rework the issues at stake in their source materials. Processing modernism therefore emerges as an epistemological act through which scholarship rebuilds, remakes, and refashions modernism itself. By processing modernism, we remake our images of the modernist enterprise anew.

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<div id="Notes">

¹ My work with *Nightwood* was produced through the Modernist Versions Project and Implementing New Knowledge Environments (INKE) in the Maker Lab in the Humanities and in the Electronic Textual Cultures Lab at the University of Victoria. The digital tool I use to represent the textual history of *Nightwood*, called ModVers, was created by Daniel Carter at the University of Texas- Austin School of Information for the Modernist Versions Project. The project code is available online at <https://github.com/danielcarter/jquery.modVers>.

² Hayles continues: “The issue goes to the heart of what we think a text is, and at the heart of the heart is the belief that work and text are immaterial constructions independent of the substrates in which they are instantiated. We urgently need to rethink this assumption, for as long as it remains intact, efforts to account for the specificities of print and electronic media will be hamstrung. Without nuanced analyses of the differences and similarities of print and electronic media, we will fail to grasp the fuller significance of the momentous changes underway as the Age of Print draws to a close and print—as robust, versatile, and complex as ever—takes its place in the dynamic media ecology of the twenty-first century. For this we will require a more workable sense of materiality than has traditionally been the case with theories of textuality that invoke it only to dismiss it as something to be left behind through the labor of creating the ideal work.” (270-271)

³ Johanna Drucker offers a lucid explanation of Kirschenbaum’s concept of forensic materiality. In her review of the book, she writes: “What I find marvelous about

Kirschenbaum's method is his reading of the usually *invisible*, the inscriptional text unavailable to the unassisted eye. This decision to "read" digital artifacts through the detailed understanding of their production is highly informative." (Drucker n.pag.)

⁴ In *Remediation: Understanding New Media*, Jay David Bolter and Richard Grusin outline immediacy and hypermediacy as central to the double logic of remediation. As they argue, remediation's attempt to create immediacy demonstrates a double impulse that is simultaneously invested in multiplication and intensification, drawing attention to the mediated status of the object at hand through the very attempt to make that object more immediate. Although this study does not immediately concern itself with the visual media for which Bolter and Grusin's work is best known, the same double logic of remediation applies to electronic texts. Digital scholarly editions make the textual and theoretical issues in a work's genesis immediately accessible; in so doing, they draw attention to the hypermediated nature of those issues that emerge not in the physical pages of archival material, but between click and drags on the computer screen. Making cultural arguments about genetic criticism, when undertaken with digital texts, therefore requires a critical awareness that issue's status as rendered immediate by the logic of hypermediacy, or visually accessible only through the artifice of the electronic interface. Responsible engagement with the cultural issues revealed through digital textual editing therefore requires negotiating the shifting boundaries of access and artifice; it is such an engagement that this study undertakes.

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Conclusion: Revision Histories

The physical form of the modernist novel—specifically as it evolves over time through the manuscript production procedures of a given author—does not always neatly correspond to, or instantiate in, the form of the book. The procedural manipulation of such forms, in turn, allows readers and editors to work through their corollary logics of use in government and industry in the modernist period. Splicing and concatenating Proust's manuscript fragments as film enables readers and editors to manipulate Proust's pages as a dynamic textual environment that reconstructs the documentary politics of the Dreyfus Affair. Similarly, sorting and listing Beckett's *Trilogy* as an index reconstructs the translation work of clerks and typists engaged in the textual deformation operations of World War II. Recovering and reconstructing these experimental forms of modernist expression requires reimagining their physical form beyond the material constraints of the book, as such forms found their expression in analog media and computation. Doing so recovers the novel as a signifying machine, built through the formal logics of mechanical assembly that equally shaped related media objects of their time.

Unfolding and engaging these mechanical forms, as they evolved through the changing apparatuses analog cultural production, recovers an evolving historicity of form over the first half of the twentieth century. As the apparatuses of mechanical reproducibility shaped literature and media, in turn giving rise to the advent of institutionalized computation, it gradually overturned the relationship between writing subject and written object. Whereas Raymond Roussel describes writing and media as objects that transmit the inscribed experience of a subject (Lucius's spectral Rebecca or François-Charles's de-crypted body), Beckett's computational writing reveals subjective

identities constructed and apprehended through writing itself. Instead of media inscription coming out of the individual, modernism's mechanical form registers a historical shift in which the individual begins to come out of inscription. Like Marcel Proust imagining the multiple contexts from which his grandmother may be speaking over the phone, the computational manipulation of text and media gives rise to multiple versions as part of the object's physical structure (charting a path from the poetic permutations of Mallarmé's "Coup de Dés" to the physical concordances of Roberto Busa's *Index Thomisticus*). From Roussel's Edisonian writing to the microfilm translation of Beckett, the formal logics of mechanized cultural production participate in the emergence of versioning as a core logic of cultural identity.

The computational construction of reality as a malleable cultural object carries into the postwar poetic experimentation of Oulipan combinatorics. Alongside the rise of algorithmic computing in the 1950s and 1960s, as the FORTRAN language progressed through its own version history (giving rise to a range of structured programs and corollary coding languages), Oulipan combinatorics produced literary texts whose formal architecture structured multiple versions and (re)visions of history. Raymond Queneau's *Exercices de Style* presented readers with 99 retellings of the same story produced through 99 different formal constraints. Each version of events recounts a different experience, a different version or narrative, of a lived event: the narrator boarding the "S" bus, witnessing an altercation between two passengers, and later encountering one of those passengers again at the Gare St-Lazare. Each form writes into existence a different subjective account or version of Queneau's history. Similarly, Georges Perec's 1975 *W ou le Souvenir d'enfance* offered readers the story of the protagonist's fantastical and

surreal childhood, revealed at the end of the book to be a fictionalized transformation of the protagonist's lived experience as a child in a concentration camp. Such unreal transformations of historical narrative, formally structured through the Oulipian narratives emerging from the second World War, carry as cognates Roberto Busa's computational restructuring of Thomas Aquinas's thought, resulting in "the creation of a radically transformed, reordered, disassembled, and reassembled version of one of the world's most influential philosophies." (Ramsay 1). Following the wartime construction of reality as a versioned construct, postwar forms of literary experimentation carry in their structures the afterlives of the combinatory cryptograph.

Yet the public emergence of digital computing signals a curious reversion of the document to a fixed state. Rather than carrying on in the writing apparatuses of pen, paper, and typescript revision, the material methods of linguistic transformation migrated from the physical structure of paper to the structures of emergent writing platforms: the typewriter; the teleprinter; the computer. The procedural production of historical reality exists in formation, and in the historical formation of the digital document. While such procedures carry into the literary and academic narratives and institutions of the 1960s and 1970s, their material functions evolved tangentially through the technological developments that materially undergirded such intellectual efforts (championed by the rise of corporate computing, at IBM and elsewhere). In other words, the ideological apparatuses of documentary production migrated into the system architectures and programming structures whose inception can itself be traced back to modernist experiments in book materiality. Accounting for this turn requires a procedural hermeneutic that reads form through content, material through metaphor, and platform

through prototype, attending to the content of text as well as its material modes of production.

To the extent that early methods for digital textual versioning emerged out of analog experiments in mechanical literature, such methods are uniquely suited to the task of (both figuratively and literally) piecing back together modernism's machine texts as dynamic environments. As such, electronic scholarly editing platforms should move beyond the pragmatics of image reproduction to additionally consider physical arrangement procedures as a recoverable component of textual genesis. While contemporary digital editions such as Woolf Online and The Samuel Beckett Digital Archive Project include image scans of manuscript pages, they might further incorporate textual arrangement as a core component of genetic reading that is not immediately afforded by the print book. Reconstructing analog textual systems in digital editing environments allows scholars to engage in procedural archaeologies that read the mechanics of governmental and industrial production in the production of the modernist novel, as well as in the digital reproduction of novels through electronic editing platforms. Doing so implicates such analog systems in their digital afterlives, as the formal and forensic logics of textual versioning and revision management excavate their own analog prehistories. Such an approach rejects neat disentanglements of theory and practice, considering how government politics and identity politics of the past continue to play out through the design of editing environments. In this sense, digital scholarly editions exist as procedural palimpsests that frame and mold the ideological apparatuses of analog textual production within contemporary apparatuses of digital production. It is

through such complex entanglements of form that digital scholarly editing can reconstruct its revision histories.

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