The advent of electronic technologies like the computer and the internet necessitated new ways of writing and thinking about writing. Where the age of mechanical and industrial technologies led to Blake’s visionary engravings and Swift imagining a random text generator in *Gulliver’s Travels*, “for improving speculative Knowledge by practical and mechanical Operations” (171), the electronic age might be said to have given rise to the work of composers like John Cage and Brian Eno, hypertextual writers such as Michael Joyce and Mark Amerika and the work of the Oulipo. Perhaps the predominant linguistic theory associated with, though not limited to, electronic technologies is that of “hypertext”. Hypertext is defined by Ted Nelson, who coined the term, as “non-sequential writing with reader-controlled links” (qtd. in Bolter 105), and George Landow as a technology that matches Barthes's ideal textuality of a “text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open-ended, perpetually unfinished textuality described by the terms *link*, *node*, *network*, *web*, and *path*” (Landow 2). Nelson and Landow’s succinct definitions are both accurate, but fail to encompass the extent to which the hypertextual model destabilizes conventional notions of the text. The notion of an electronic or hypertextual writing space disarticulates ideas of textuality from the linearity and materiality of the culture of the book. It provides a model for a text which is non-sequential, positions itself as a kind of literary apparatus or machine and is almost emblematic of the deconstruction of logocentrism inherent in contemporary critical theory. So total is its destabilization of textuality, that the hypertext produces itself as a ruptured textual fabric, full of discontinuities, splits, divisions, absences and holes. In a sense, it paradoxically becomes the locus of its own erasure, “a void rubbing out its own inscription” (Perec, *A Void* 278). This essay will examine the ways in which hypertexts erase themselves, and the implications this paradox of self-erasure has for the whole field of signification, the material status of the text and hypertextual conceptions of identity.

According to Marshall McLuhan, an early proponent of electronic textual mediation, the hypertextual model “steps up the velocity of logical sequential calculations to the speed of light … and at the same time it dissolves hierarchy in favour of decentralisation” (103). What McLuhan omits to mention is how the hypertext’s decentralized, non-linear narratives actually compromise its structural integrity, rendering it a kind of fragmentary textual fabric
in which contradictory and paradoxical events can occur simultaneously. The application of hypertextuality to Jorge Luis Borges’s story ‘The Garden of Forking Paths’, which is frequently employed by hypertextual theorists, demonstrates how hypertext dissolves linear narratives. Here, the narrator compares conventional linear narrative, “In all fiction, when a man is faced with alternatives he chooses one at the expense of the others” (98), with the perpetually bifurcating virtual labyrinth woven between an infinite number of possible worlds in a book by a Chinese philosopher named Ts’ui Pên:

In the almost unfathomable Ts’ui Pên, he chooses – simultaneously – all of them. He thus creates various futures, various times which start others that will in their turn branch out and bifurcate in other times … In Ts’ui Pên’s work, all the possible solutions occur, each one being the point of departure for other bifurcations. (98).

In Ts’ui Pên’s labyrinth, as in the hypertextual model, narrative is not a succession of binary choices, but an endless and unstable web of bifurcations and convergences in which “all possible solutions occur”. Instead of reinforcing the text’s structure, the hypertext produces itself as its own absence by opening narrative potentiality to “every possibility” (100). Binary oppositions which are made to co-exist within the narrative contradict and destabilize one another, leaving a text in which the narrative erases itself. Borges anticipates this paradox of self-erasure in his description of how, in Ts’ui Pên’s work, one can be simultaneously alive and dead: “In this [world], in which chance has favoured me, you have come to my gate. In another, you, crossing the garden, have found me dead. In yet another, I say these very same words, but am an error, a phantom” (100). The self-erasure inherent in the hypertextual model gives it a similar kind of spectrality and creates what we might think of as a “phantom” text, a textual fabric so porous that we can never be completely certain of whether it is there or not.

Notions of self-erasure and spectrality inevitably lead us to questions on how the hypertextual model also undoes conventional ideas of the materiality of the text. Gilles Deleuze and Felix Guattari’s conception of chaos might help us to understand how hypertexts undo their material status by becoming the sites of the free play of signifiers, by “containing all possible particles and drawing out all possible forms” (*Philosophy* 118). As with the idea that the hypertext is a void erasing its own inscription, “chaos”, for Deleuze and Guattari, “is defined not so much by its disorder as by the infinite speed with which every form taking shape in it vanishes. It is a void that is not a nothingness but a virtual” (118). Deleuze and Guattari provide us with the paradox of a material immateriality, “a void that is not a nothingness”. It is a form of writing that consists of disembodied signifiers, which “spring up
only to disappear immediately” (118), suspended in a virtual world with no solid, material reality. Mark Amerika’s online literary hypertext, *GRAMMATRON*, goes some way to exemplifying Deleuze and Guattari’s concept of a virtual writing space. Amerika uses internet technology to create a narrative network which is decentralised and generates random linking structures between narrative events. On one page, the reader is presented with a multiplicity of hyperlinks to choose from (for example, “Grammatron”, “Nanoscript”, “how he was going to survive”, and so on), all of which continue the narrative in different ways. Once a hyperlink is chosen, or is randomly selected by the program, the other possibilities are instantly erased and a series of new possibilities is presented. This creates a network of significations with multiple semantic links throughout the text. The novel is a virtual world, which is defined by the way in which “every form taking shape in it vanishes” as the narrative advances. In this way, *GRAMMATRON* is a form of writing suspended in cyberspace, a virtual text which moment-by-moment never exists in the same material form. In contrast to the printed text, a physical entity which the reader can literally and metaphorically grasp as something which has a clearly distinguishable beginning and ending, the electronic text completely reinvents the reading process. Electronic texts subvert the linear, teleological structures inherent in the culture of the book, perpetually deferring the ending, as the text generates infinite possibilities. Although many printed texts exhibit hypertextual characteristics, such as James Joyce's novels *Ulysses* and *Finnegans Wake* or John Barth's *Lost in the Funhouse*, it is in electronic texts like *GRAMMATRON* that the hypertextual model is best demonstrated. Hypertexts like *GRAMMATRON* challenge the very notion that texts should have a fixed material form, and force us to find ways to explain how a text’s material presence is transformed into a site of virtual or symbolic signification.

Jay David Bolter, in his essay ‘Topographical Writing: Hypertext and the Electronic Writing Space’, uses the term “topographical writing” to speak of the way that hypertexts unfold in electronic space. In Bolter’s view, virtual texts like *GRAMMATRON* necessitate different modes of considering the structure of the text and the mechanics of writing practice. For Bolter: “Layers of software in turn transform the machine’s physical space of electronic circuits into a space of symbolic information, and it is in this space that a new kind of writing can be located” (107). So, the text no longer exists conceptually in a physical form (for example, as ink on paper), but occupies a space with no definite, material presence. This new kind of writing, Bolter states, is “extremely malleable” and can “represent any relationships that can be defined as the interplay of pointers and elements” (108). He contrasts this kind of electronic writing with forms of word processing which merely “flatten the text” (106), or
“any printed or written text, [in which] one hierarchical order always precludes others” (108). Although much of what Bolter claims is helpful in explaining how electronic technologies have expanded the possibilities for writing and helped us to understand how the material aspects of the text are transformed into “a space of symbolic information”, he fails to see how printed texts have never behaved in the limited, hierarchical ways that he suggests they have. Hypertext is a model which can be applied both to printed books and electronic writing. Some printed texts behave like “1000th generation computer[s] … beside which the current technology of our computers and our micro-computerified archives and our translating machines remains a bricolage” (Derrida, ‘Two Words’ 147); whereas electronic writing can be “extremely restricted” and may be said to provide “merely a clumsy approximation” of the capabilities of the printed text (Armand, Technē 186). Therefore, even if electronic texts like GRAMMATRON perhaps provide us with better ways of understanding hypertext than printed texts do, issues surrounding the question of how texts transcend their material constraints do not necessarily rely upon similarities or differences between print culture and electronic writing. Indeed, it is possible to conceive of both printed books and computer-based writing as having “material” textual fabrics (the page and the computer screen). Instead, the metaphor of an electronic writing space, or of hypertext as computer-based writing, provides us with new ways of thinking about how this influences the (im)material aspects of the whole field of signification.

The hypertextual signifying apparatus is characterized by recurring themes of bifurcation, simultaneity, virtual narrative structures, and so on. These all bring to mind an essential feature of hypertext: the transversal (Armand, Contemporary Poetics 296). In geometric theory, transversality has to do with the intersection of two or more lines at different points; in hypertextual theory, transversals proliferate across the text, bridging gaps between narrative or semantic events, transforming and opening-out meaning with every new connection. Italo Calvino’s experiments with cybernetics and combinatorial modes of writing clearly anticipate transversality in the way their textual elements “enlace” and “intersect” (258). His novel If on a winter’s night a traveller is structured as a succession of the beginnings to ten different novels interlaced with twelve chapters in which the narrator describes the fictional reader’s actions and relationships. In the closing lines of the novel, it becomes apparent that these ten different novels are actually part of a greater whole, as together their titles form a single, continuous sentence which both describes and enacts the ways in which these disparate novels intersect: If on a winter’s night a traveller, outside the town of Malbork, leaning from the
steep slope without fear of wind or vertigo, looks down into the gathering shadow in a network of lines that enlace, in a network of lines that intersect, on the carpet of leaves illuminated by the moon around an empty grave – what story down there awaits its end? (258).

By linking them in this way, Calvino establishes transversals between the individual narratives, challenging the notion of single, coherent narrative and turning *If on a winter’s night a traveller* into a collective text which is multi-authored and multi-layered. In the same way that Louis Armand suggests that hypertext is “structured by means of prepositions, which act as fundamental connectors” (*Technê* 102), Calvino’s ten titles are grammatically connected to form a single sentence. For Calvino, who “looks at chaos from a position that foregrounds order” (Pilz 164), linking these ten titles is perhaps an attempt to create an overarching structure which unifies the text, systematically tracing the relationships between the ten intersecting novels. Yet, in this effort to re-establish order in the text, Calvino’s use of transversality actually undermines the structural unity of the text. The shifting syntax continually reorders syntactic relationships so that this overarching structure is constantly being destabilized. The deferral of the interrogative, “what story down there awaits its end?”, and gathering of prepositions, “If … in … in … on”, into distinct clauses enacts a series of discrete subordinations, in which each successive syntactic unit displaces (or erases) the previous one until definite meaning is lost in a miasma of digression and deferral. Indeed, in spite of the narrator’s claims to be looking “without fear” into the convoluted structure of the hypertext, there is something ominous and obfuscatory in the image of the “gathering shadow” and the “empty grave”, which suggests that meaning is irrecoverable and that it is impossible to tell “what story down there awaits its end?”.

In contrast, there have been various unsuccessful attempts to unpick the polysemous structures of electronically mediated texts, both of hypertext and forms of writing which anticipate hypertext, and form a notion of the text as a unified object. Theorists such as Paul Ricoeur and Algirdas Greimas have identified the possibility of reducing polysemy in order to achieve a signifying unity in discourse. Ricoeur has fought for what he calls the “screening of polysemy” (qtd. in Armand, *Technê* 186), claiming that it is possible to create a univocal discourse by filtering out surplus meaning; and Greimas has similarly argued that “discourse can be rendered univocal through the reduction of polysemy” (Armand, *Technê* 186). In hypertextual theory itself, Bolter’s concept of “topographical writing” suggests that it is possible to recover the underlying linear narrative of a hypertext by treating transversals as links between discrete, textual events. In Bolter’s mind, the hypertext can always be
deciphered and the narrative approached using conventional analytical methods. Although Bolter’s efforts to reconstruct linearity are understandable, he fails to see how transversality can create an impenetrable labyrinth of meaning, making it impossible to close off or impose structure on the field of signification. Similarly, some critics of the Oulipo (*Ouvroir de littérature potentielle*), a group of writers who employ constrained writing techniques that share some of the characteristics of hypertext, have claimed that the mechanistic constraints placed on the Oulipian text lead to a systematization of meaning which belies the text’s complexity and irreducibility. For these critics, the *Oulipeme* (a text produced by the Oulipo) is “restricted to the confines of [its] predetermined limitations” (Harry Mathews qtd. in James 117). Take, for example, the method known as “S + 7,” in which all nouns (*substantifs*) in a root-text are replaced with the seventh noun which follows them in a given dictionary. Following the logic that the text is merely the product of its “predetermined limitations”, the potentiality of the *Oulipeme* is constrained by its root-text and the dictionary used. The substituted nouns may be restricted to looking and sounding like the root-noun, as they are close to one another in the dictionary, giving the impression that meaning is predictable. However, alphabetical proximity is no guarantee that the substituted noun will have any semantic similarities. As with hypertext, S + 7 provides a continual shifting and opening-out of meaning, which makes it impossible to delineate the text. Take, for example, François Caradec’s poem ‘Le souvenir de Jean Queval’:

Il pleuvait.
Je vis entrer Jean Queval
    dans un cabriolet de la rougeur du bain,
    dans le cachalot de la roulure du baigneur
    …
    dans un petit café de la rue du Bac. (qtd. in James 116).

This poem demonstrates how the repeated application of a rule like S + 7 prompts a potentially limitless series of meanings. The poem places its protagonist, Jean Queval, in a number of distressing and even impossible situations, exploring the unsettling possibilities of language. The accumulating clauses defer what we take to be the original phrase, “dans un petit café de la rue du Bac”, and suggest a seemingly endless number of transformations. Therefore, as Oulipo member Harry Mathews suggests, the Oulipian text is not “restricted to the confines of [its] predetermined limitations”, but is a “liberator” of meaning (qtd. in James 117). Instead of utilizing reductive models like Bolter’s notion of “topographical writing” to understand hypertextuality, we might turn to Georges Bataille’s vision of a complex and
irreducible field of signification. Bataille, alluding to the Nietzschean concept of eternal recurrence (ewige Wiederkunft), thinks of language as being constructed like a labyrinth, disseminating its meaning through transversals or, as he terms them, copulas:

… each phrase connects one thing to another by means of copulas; and it would be all visibly connected if one could discover in a single glance the line, in all its entirety, left by Ariadne’s thread, leading thought through its own labyrinth. (qtd. in Armand, Technē 102).

In Bataille’s labyrinth, as in hypertext or Oulipian models, finding Ariadne’s thread proves to be the stuff of myth and fantasy, as transversality does not restrict itself to simple, linear narrative threads. Perhaps the predominant use of transversality is in connecting a text with its literary precursors. This is certainly true of S + 7, as its lexical transfers depend upon its triangular relationship with its two source texts (its root-text and the dictionary used). In Oulipian theory, the root-text is designated by Gérard Genette as a “hypotext” (where the text itself is a “hypertext”), and by Georges Perec as a “texte-souche” (Genette 44). It is the intertextual relationship between a hypertext and its hypotext/texte-souche that further complicates the structure of the Bataillian labyrinth. In their introduction to Post-Structuralist Joyce, Attridge and Ferrer explain that it is due to “the infinite productivity of interpretative activity” that texts are able to so radically reinterpret their precursors (7). They describe the ways in which the expansion of intertextual networks leads to the “impossibility of closing off the process of signification, the incessant shifting and opening-out of meaning in the act of reading and re-reading” (7-8). Therefore, the labyrinth of transversality produced by intertextuality undoes any attempts at a “reduction of polysemy”, creating a textual fabric which is irreducible and almost innavigable. Furthermore, this continual reinscription of precursor texts and the “incessant shifting” of the textual fabric inevitably leads to the destabilization of the hypertext. In this way, hypertextual transversality produces a kind of palimpsest, a text which is constituted by the erasure of its hypotexts.

Historically, a palimpsest is a manuscript or parchment on which old text has been eradicated in order to provide space for new text. Hypertexts with multiple intertextual links behave like palimpsests, as they efface and rewrite their precursors, producing themselves as sites of erasure and fragmentation. Recently, computer technology has been used to create virtual palimpsests and demonstrate the ways in which intertextual connections operate. In the early 1990s, Fritz Senn and the Zürich Joyce Foundation created a virtual palimpsest of a passage from James Joyce’s Finnegans Wake. HyperWake, which was presented at the XIIIth International James Joyce Symposium in Dublin (June 1992), is:
… simply a labyrinthine presentation of 6.13-28 (“Shize fuddled, O!”), a sort of extended annotation. You can hear the text (spoken by two different Irish voices), switch to two German and a French or an Italian translation; or follow the text’s growth and genesis in several stages … Of course the main point is that everything will become expandable \textit{ad libitum}. (Senn qtd. in Armand, \textit{Technē} 61).

Rather than merely annotating Joyce’s original text, \textit{HyperWake} exemplifies the infinite productivity of interpretative activity. The \textit{ad libitum} expansion of possible interpretations almost effaces the source text, transforming it into a constantly bifurcating textual labyrinth which bears little resemblance to the passage as it occurs in \textit{Finnegans Wake}. The constrained writing techniques of the Oulipo have also been used to transform the texts to which they allude. Perec’s lipogrammatic novel \textit{A Void} (originally \textit{La Disparition}), contains a number of passages in which he rewrites famous literary texts without a single letter ‘e’. By self-consciously removing the letter ‘e’, Perec literally erases parts of the \textit{texte-souche}. Thus, the lipogrammatic version of Hamlet’s celebrated soliloquy “To be or not to be” becomes “\textit{Living or not living: that is what I ask/If 'tis a stamp of honour to submit/To slings and arrows waft'd us by ill winds …}” (101). Although he retains the basic meaning, Perec’s hybrid version erases Shakespeare’s syntax and enacts slight semantic variations which significantly transform the way it is read. For example, the jarring image of arrows being “waft'd us by ill winds” sits in sharp contrast to Shakespeare’s “outrageous fortune”, demonstrating how relatively minor lexical restraints can have a profound impact on the meaning and structure of the root-text. Similarly, the Oulipian Raymond Queneau offers an extreme example of how the reduction or “haikuification” of the \textit{texte-souche} creates a fragmentary new text (192). Queneau takes a sonnet by Mallarmé and retains only the ending of each line. So, a verse from Mallarmé,

\begin{quote}
But near the vacant northern window, gold
Expires, conformed perhaps to the motif
Of unicorn flames rearing at a nymph …
\end{quote}

is reduced to Queneau’s “haiku”:

\begin{quote}
Gold?
the motif…
A nymph …
\end{quote}

In spite of Queneau’s claim that meaning is “accumulated” in the ending of each line of Mallarmé’s poem (191), in reality, the absence of the source text is felt in every line of the
new text. Queneau’s “haiku” is a palimpsest, a partially erased text which paradoxically effaces the text which was used to write it; in Perec’s words, it is a “void rubbing out its own inscription”.

The creation of a hypertextual labyrinth of signification not only affects the stability of the textual structure, but also has a profound impact on the characters within the text; in hypertext, textuality transforms the construction of selfhood. In such chaotic textual worlds, the status of the individual subject changes, as they become destabilized by their surroundings. In hypertexts, characters’ identities are constantly under threat of destabilization or they disappear completely. In Amerika’s GRAMMATRON, for example, the main protagonist, Abe Golam, struggles to find “more words to transcribe his personal loss of meaning”, and wonders, “how he was going to survive” in the endlessly shifting hypertextual world that he occupies (<http://www.grammatron.com/gtron1.0/Abe_Golam_907.html>). In A Void, Perec thematizes the lexical constraint, as along with the omitted letter ‘e’, the central character, Anton Vowl, goes “missing” in the fourth chapter (40). Throughout his novel, the erasure of the letter ‘e’ has severe repercussions not only on Vowl’s identity but also on Perec’s own identity as author, as without the letter ‘e’, Perec cannot even write his own name.

Notions of absence are certainly important to Perec’s conception of identity, specifically of his own Jewish identity. In an essay about Ellis Island, the primary location for the entry of immigrants into the United States, Perec claims that Ellis Island’s status as “the very place of exile, that is, the place of the absence of place” is “very intimately and confusedly linked to the actual fact of being a Jew” (Species of Spaces 136). Ellis Island, like Jewish identity, is one of Marc Augé’s “non-places”, sites of transience and little substance, it has “a sort of negative quality of place, an absence of the place from itself” (85). For Perec, Jewish identity is conceived of in terms we might use to describe the labyrinthine structure of the hypertext: it is “something without shape, at the limits of the sayable, that I might call a closing-off, a scission, or a break …” (Species of Spaces 136). It is due to this “closing-off” of identity that characters like Anton Vowl can only be effectively defined by their absence. Deleuze explains how this “dissolution of the subject” is a by-product of the “chaotic and bifurcating world” of the hypertext. Deleuze finds that the “monadic subject” has given way to the “nomadic subject”; instead of expressing selfhood from within, in hypertext, identities are “torn open” and characters are pulled “outside themselves” by these expanding textual labyrinths (Critical and Clinical xxix). In the same way that Perec views selfhood as “something without shape”, Deleuze conceives of selfhood as a “multiplicity, the
actualization of a set of virtual singularities that function together” (xxix). In other words, the identities of the characters in hypertexts and texts that resemble hypertexts are as ruptured and destabilized as the textual fabrics they occupy. Hypertext, in addition to being the predominant linguistic expression of electronic technologies, provides a suitable means of comprehending identity and textuality in the contemporary era. Accepting Deleuze’s notion of the nomadic subject, identity now occupies a liminal zone between selfhood and otherness, in the same way that textuality sits between the “inside” and “outside” of language. Jacques Derrida, in *Of Grammatology*, presents this notion graphically, using the equation:

\[
\text{The Outside } X \text{ the Inside (44)}
\]

In Derrida’s model, the symbol of erasure (in *Of Grammatology*, “X” visibly erases the word “is”) demonstrates the instability of the hypertextual connections between self and other, between “inside” and “outside”. In many ways, hypertext is actually represented by the mark of erasure between the “inside” and the “outside”, as it sits in the continually shifting and paradoxical position between being (is) and erasure (X). In the contemporary era, both identity and textuality occupy this virtual position between being and nothingness. Adopting the language of Deleuze and Guattari, both our texts and our sense of selfhood are now constituted by a “virtual cosmic continuum of which even holes, silences, ruptures, and breaks are a part” (Deleuze and Guattari, *Thousand Plateaus* 106).

The inquiry into the relationship between identity and hypertextuality needs to deepen; as the era of internet technology and electronic textuality dawns, we need to find new ways to explain and express our changing senses of selfhood. In this essay, I have attempted to show how the advent of these new technologies has led to the creation and development of a new kind of textuality: hypertextuality. Although it shares certain features with conventional forms of textuality, hypertext is specifically catered to texts which attempt to destabilize the linearity and materiality inherent in the culture of the book. As I have shown, so complete is this destabilization, that hypertexts produce themselves as continually shifting and chaotic textual labyrinths, which are so fragmented and convoluted that they paradoxically become the sites of their own erasures, *voids rubbing out their own inscriptions*. In drawing comparisons between selfhood and hypertext, this essay suggests that if we are to successfully understand the ways in which our own fragmented identities are being produced, it is necessary to heed these significant changes in textuality.


