

# Jorge Luis Borges: A Forerunner of the Technology of the New Millennium

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## ABSTRACT

"The Garden of Forking Paths" which is one of Jorge Luis Borges' masterpieces shares certain characteristics with hypertext writing and questions the contrived possibilities of print long before the advent of the electronic hypertext. However, there exist some similarities and differences between the "forking paths" presented by Borges in his short story "The Garden of Forking Paths" and the "links" which exist in hypertext.

**KEYWORDS:** Borges, hypertext, hypermedia, links, forking paths

The term hypertext which was coined in the last fifty years was envisioned by several writers before the advent of the electronic hypertext. Julio Cortázar's *Hopscotch* as well as several works by the Argentinean Jorge Luis Borges are at the top of the list when searching for ancestors of hypertext. Cortázar and Borges are considered forerunners in the realm of hyperfiction because they foresaw a type of writing which shares qualities with the ones embedded in the electronic hypertext. Cortázar's *Hopscotch* opens the possibility to two types of readings, one where the reader follows the lineal chronological sequence of the novel and another one which has been suggested by the author at the beginning of the novel. Jorge Luis Borges, on the other hand questions the contrived possibilities of print by creating texts which permit the possibility of imagining multiple worlds and endings.

According to David J. Bolter in his book *Writing Space: The Computer, Hypertext and the History of Writing*, Borges' work "An Examination of the Work of Herbert Quain" "is the literary obituary of a writer who tried to

liberate his texts from linear reading and static interpretation. Quain's novel *April March* is nothing less than an interactive fiction [1]. Similar assumptions have been made by Stuart Moulthrop in his article "Metonymy and Metaphor in the Fiction of Forking Paths" and by Ema Lapidot in her article "Borges: Between the Printing Press and the Hypertext" [4]. Still Borges' texts resist their conversion to a hypertextual version since their intellectual appeal lies not on the visualization of the connection that the mind makes but in the possibility of creating new and fictitious worlds in our minds.

In order to understand the impossibility of such a conversion I will start by examining "The Garden of Forking Paths" one of Borges most cited work in reference to hypertext. Borges' title is a metaphor for alternate worlds or ideas and the words forking paths signal such a possibility from its onset: from its title. Thus, the main objective of this study is to analyze the differences between the forking paths proposed by Borges in his work and the links present in hyperfiction.

Through language, Borges' forking paths create the possibility for imagining alternative worlds, whereas the electronic links allow the reader to move from one node or lexia – as referred to by Roland Barthes – to another thus allowing the reader to create his own path. How does a forking path differ from a link? The first section of this study will explore those differences having in mind the main features of links in interactive fictions as well as Borges' interest in the imaginative process and the overwhelming power of language. In spite of the limitations that the print medium present to materialize Borges' dream of multiple worlds, it is through language that the writer attempts to achieve his goal. Borges' title "The Garden of Forking Paths" states the writer's dissatisfaction with the contrived possibilities offered by print. His text attempts a way to infinity and the story suggests the possibility of a text, which branches off into infinity allowing the emergence of different stories. This position resembles Foucault's ideas. In his essay "Language to Infinity" where Foucault tries to transcend the limits of language stating that

“languages claim to tell all is not simply that of breaking prohibitions, but of seeking the limits of the possible, the design, in a systematically transformed network, of all the branchings, insertation, and overlappings which are deduced from the human crystal in order to give birth to great, sparkling, mobile and infinitely extendable configurations” [3]. These ideas are illustrated in “The Garden of Forking Paths” since through the title Borges suggests a story which gives way to infinite stories, a language garden where worlds proliferate in an almost endless fashion. By the same token the title sets an ironical mood because Borges knows of the impossibility of presenting an infinite number of stories through the printed medium. Thus, his only way out of his own labyrinth to account for multiple worlds is by referring to the power of language and the reader’s imagination. From this perspective “The Garden of Forking Paths” as well as Borges “The Library of Babel” deal with the irony which does not exist in hypertext. It portrays in a daring fashion the limitations of the printed medium, while at the same time elevates the power of the human mind, intellect and language.

From its onset “The Garden of Forking Paths” delineates Borges’ irony. The technological developments of his time have yet not made possible the fulfillment of Borges’ dream. His attempt to produce a visual multiple story fails since he is contrived not only by the characteristics of the detective story but also by the medium chosen to develop it. His irony is one referred to as *mycterism* – a sneer-, since he dares to look at the situation with certain contempt and subliminally highlight the power of man’s imagination. Borges’ title suggests an infinite number of stories which branch off giving way to new stories, yet in order to adjust his will to the technological limitations of his time, Borges’ text can only give way to two stories, thus reaffirming his position of the inability of technology to contain man’s imagination. Print is seen as a containment, whereas Borges’ words are a challenge to the imagination and exceeds the limitations of print. Hence if we look at hypertext from a *Borgesian* perspective we see that there is no irony in hypertext but that it presents paths or links which open the way for multiple stories. Hypertext can be said to be Borges’ impossible dream of containment: the work is in the hand of language. Borges’ forking paths exceed the limitation of any technological aid to represent man’s imagination. As Stuart Moulthrop stated “no hypertextual product can realize the ‘strictly infinite labyrinth of Borges’ fantasy” [6]. Borges’ forking paths accept almost no limitations whereas the limits in hypertext have undergone the restrictions imposed by the programmer. In spite of all, hypertext fiction writers also try to go beyond these limitations by creating virtual environments where readers co-authors of their own stories. A clear example of this type of hyperfiction is *Hotel Moo*, an environment which suggests an almost endless story since it keeps branching off into an infinite number of them. Interactive fiction created to be read on the computer screen is a relatively a new genre. Its creation has been mainly attributed to hypertext writer and developer Michael Joyce who in 1987 produced “Afternoon” one of the first

examples of hyperfiction. “While a printed novel presents its episodes in one order, the electronic writing space removes that restriction for fiction as it does for the essay. Instead of a single string of paragraphs the author lays out a textual space within which his or her fiction operate” [1]. In order to move through the text and interact with it, the reader needs to activate links, which in turn will determine the reader’s next step or course of action. Thus links constitute a crucial element in the creation of a hypertext fiction since their selection undoubtedly affects the reading process. Taking into account Douglas Hofstadter’s claim that perception of relatedness is a defining characteristic – perhaps the defining characteristic – of intelligent behavior, John Slatin states:

Hypertext embodies this idea, for everything in hypertext depends upon linkage, upon connectivity between and among the various elements in the system. Linkage, in hypertext, plays a role corresponding to that of sequence in conventional text. A hypertext link is the electronic representation of a perceived relationship between two pieces of material, which become nodes once the relationship has been instantiated electronically. That is, the link simulates the connections in the mind of the author or reader; and it is precisely because the electronic link is only a simulation that problems will arise [7].

Links or ‘decision points’ as Michael Joyce and Jay Bolter call them are created having a rationale in mind, but in all cases the links have been limited by the possibilities of the authoring program used to create the literary piece. From this perspective the links in hyperfiction provide a limited number of links which lead to multiple pathways, making thus possible a limited number of different stories already limited by the system. It is up to the author who in many instances is the developer to set the limits of his hyperfiction since he is the one who can provide the reader with an authorial capability which allow him to see the connections he has established in a graphic fashion. By the same token it is the programmer who can allow the reader to add *lexias* to the existing nodes of the text. At present commercial interactive fiction takes the mode of read only text, though there is an experimental project called *Hypertext Hotel Moo* which is created on the web and allows the addition of nodes by different users. *Hypertext Hotel Moo* is a project at Brown University that allows collaborative writing and flexible narrative experiments.

On many occasions it has been said that hyperfiction is nothing more than a sum of links which adds confusion to the reading process. According to Stuart Moulthrop “links may mean more than they appear to do on a simply technical level. Instead of focusing entirely on instantaneous replacement we might think of links as having two components: the visible binary circuit of connection (technology’s *fort/da*) and the unseen matrix or “structure of possible structures “against which this transaction is realized, figure against round” [5]. Such an interpretation of links permits to envision other paths besides the ones selected by the reader. What the link does is to activate one of multiple possibilities of the text. The

actual clicking on the link brings to surface and thus materialize – to a certain extent- one of the paths delineated by the author. Hence links in hyperfiction act as catalyst elements in the study of narrative. By bringing to the surface one of the several possibilities of the text, it creates a space for discussing the act of reading and narratives. According to hyperfiction writer David Bolter “Afternoon”, his first hyperfiction, becomes an allegory of the act of reading. The struggle for meaning is enacted by the characters in “Afternoon” which is by now a conventional theme of twentieth century literature. What is new is that the allegory is played out by the reader as he or she reads [1]. In a similar fashion , Borges’ story is something else than the meaning of its two hidden stories. Borges’ “Garden of Forking Paths” is about issues such as time, language and human imagination. Bolter’s “Afternoon” is not so much about its plot as it is a story about its own reading and the reading of hyperfiction. By bringing forward this issue on the screen or virtual world the story materializes the problem, making it more tangible and accessible than Borges’ presentation of alternate worlds.

### FORKS TO INFINITY

Borges’ work “The Garden of Forking Paths” represents a study of time and the power of language. These issues are presented to the reader through the metaphor “forking paths” which attempts to create a visual representation of the problem. Borges offers the reader a choice of path, a choice whereby the reader will determine the fate of the characters. If the reader explores “The Garden of Forking Paths” as the plot of a detective story he will face the potential need for closure and resolution. On the other hand if the reader understands Borges’ metaphysical ideas, he might be willing to engage in the search of the multiple plots hinted by the author throughout the text.

In a hypertextual version of “The Garden of Forking Paths” Yu Tsun’s vision of alternate selves would be no illusion. The ending in which Yu sacrifices friendship to duty could be avoided; the reader could select a different way through the garden of forking paths. Borges makes the reader aware of other possibilities when Stephen Albert, making reference to time, says: “We do not exist in most of them. In some you exist. In this one, in which chance favored me, you have to come to my gate. In another, I say these very same words, but am an error, phantom” [2]. This paragraph foreshadows Albert’s death. This death helps to bring closure to the story. There are two main reasons why “The Garden of Forking Paths” tries to bring closure to the reader. On the one hand, it is a detective story and as such needs a resolution. On the other hand it has been written in a printed medium which limits the visible and actual branching of the story in different paths. Yet, as the paragraph quoted earlier shows, the author has given the reader hints to imagine different endings. This ambivalent ending paves the way for hypertext since it allows a number of different possibilities as hypertext does. In an exploratory hypertext the reader is given a limited number

of choices, whereas in a creative hypertext the reader can actually write an ending to the story. “The Garden of Forking Paths” resembles a constructive hypertext since the reader could add his own ending to the story. Through the reader’s process of creating an imaginative ending to the story the text manages to overflow the boundaries of print. It is the reader’s engagement in the thinking process, which allows the creation of a new literary text.

Viewed from this perspective Borges’ forking paths reach outside the limits of print and move towards infinity branching into an infinite number of paths which are the product of the reader’s imagination. Hyperfiction links, on the other hand depend on the links set by the programmer. Advances in technology will demonstrate how far hyperfiction links can go in creating environments where readers become co-authors of their own stories in an environment which suggests an almost endless branching off into an endless story.

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