Manipulating Manipulative: Hypertextuality in Stephenson's *The Diamond Age:*

or, A Young Lady's Illustrated Primer

Neo-Victorian in design, Neal Stephenson's *The Diamond Age: or, A Young Lady's Illustrated Primer* creates a fragmented utopian/dystopian future where humans can manipulate the world at will through microscopic aerostats. As a Dickensian tribute in many ways, both literally and figuratively, the novel skirts a Vingean Singularity while focusing on a little impoverished girl on the margins. This Little Nell is contradictorily depicted as a stabilizing and subversive force with the help of a unique, and arguably fetishized, artifact: *A Young Lady's Illustrated Primer*. With this paper I seek to briefly examine the hypertextual components of the *Primer* within Neal Stephenson's *The Diamond Age* and its effects on the learning and development of Little Nell. The purpose is to determine if Nell is truly a posthuman construct and whether or not the *Young Lady's Illustrated Primer* is the epitome of a highly networked, hypertextual system.

The *Primer* could be loosely defined as a nanotechnological version of a present-day e-reader such as the Amazon Kindle or the Apple iPad 2, even though it predates both by over a decade. Made up of "smart paper" which consists "of infinitesimal computers sandwiched between mediatrons," each "page as a whole constituted a parallel computer made up of about a billion separate processors" (64). Lord Alexander Chunk-Sik Finkle-McGraw, one of several duke-level Equity Lords that rules this nanotechnological future, commissions this extraordinary book for his granddaughter, Elizabeth, as a birthday present (18). He hires John Percival Hackworth, a well-regarded nanotech engineer, to design the *Primer*. The purpose of the book is to inculcate its owner with subversiveness by mixing a "the nobleman's emotional stance" with "the pluck to take risks with her life" (81). Hackworth, seeing the potential of such a device, designs an elaborate scheme to filch "a second, secret copy of the Primer" to give to his

daughter, Fiona, only to be assaulted by a small gang of thugs who capture his illegal copy and give it to another girl entirely – Nell (84).

When little Nell is first given the stolen *Primer*, the book becomes irrevocably her possession. What once was a story about "a little girl name Elizabeth" becomes a story about "a little Princess named Nell" (93, 95). The *Primer* adapts and adopts specific environmental stimuli in Nell's material reality as it composes a parallel fantasy world that gradually shapes "the unique psychological terrain" of Nell into a supposedly outstanding member of Neo-Victorian society (107). More importantly, the inherent mutability required to complete its designated purpose, along with its prescribed focus on Nell as the reader, indicates that the *Young Lady's Primer* is not just a "powerful graphical computer" but also a hypertextual construct (64).

The *Primer* resembles what K. Eric Drexler defines as "a book-sized object [that] will be able to hold a hypertext system containing images of every page in every book in the world" (221). Drexler and his precursors believe hypertext fiction to be the penultimate manifestation of Roland Barthes' vision of the text: a decentered plurality of texts often self-referential and self-contained ("From Work to Text" 160). As N. Katherine Hayles argues, hypertexts are extremely complex, but also highly mutable systems, which have the distinct ability to organize and present information still entangled by "multiple pathways and recursive loops" ("Artificial Life" 214). This type of non-sequential plot structure, along with its ability to cohesively integrate outside sources to form meaning, is what allows the *Young Lady's Illustrated Primer* to function as it is described. Nell knows "from the very first day Harv [her brother] had given her the book, how the story would come out in the end," even if she is not aware of how she will get there because the path has yet to be formed (Stephenson 343).

The anfractuous and discursive nature of hypertext fiction means Nell is "reading the same story" over and over again in the *Primer*, but it is always "longer and more involved" because it keeps "backtracking and focusing in on tiny little bits of itself" (Stephenson 135). Moreover, the book's recursive design afforded by its hypertextuality provides Nell with the ability to return and expand on any aspect of the narrative she chooses in order to learn and explore additional possibilities. For instance, when she grew interested in martial arts again, Nell "paged back in the Primer to the Dinosaur's Tale" and found "Dojo was still holding lessons there," even though both Dojo and Dinosaur had left the linear narrative long ago (315). Nell's keen realization that some events "have happened hundreds of times during her relationship with the Primer," but each and every event "developed more ramifications the more closely she read it," encourages her to continually read the book while it simultaneously permits the book to continually inculcate her as designed (343).

The *Primer's* addictive dynamism is also inextricably linked to its high degree of interactivity. The *Young Lady's Primer* can be read like any other book, but it can also teach an untrained reader how to read starting with "R is for Run" and moving onto more complex vocabulary like "Angry Alligator Appeared" (96). As Nell grows, the *Primer* actually evolves and further becomes "more like a [inte]ractive and less like a story" (258). From the beginning, Nell is able to manipulate aspects of the text, including adjusting the pace of the narration and the perspective of images provided in the text. But as the narrative progresses, moments that mimic virtual reality begin to appear where Nell must physically preform specific actions in a particular way in her material reality in order to move the narrative forward. When required to start a fire "she picked up the rock and the knife and began to whack them together" even though "she was just moving her empty hands in space" (137).

These physical interactions, their increasing prevalence within the narrative, and the performative force they require, highlight another aspect of the books hypertextuality. As a result of Nell's required participation in the ongoing construction of the narrative, she is incidentally given the freedom to annotate, revise, and add to the text. The book grants Nell the distinct ability to create a wholly unique and private world and, in doing so, the *Primer* becomes "a text speaking not only to her, but also for her, a text adapting itself to her most personal desires" (Ryan 13). Nell, then, is no longer simply a reader but also a writer of the narrative and becomes the embodiment of what Marie-Laurie Ryan declares as the "egalitarian dream of the participation of the reader in the creative process" (12).

Unfortunately, even though the *Young Lady's Illustrated Primer* is clearly a powerful hypertextual construct, it can easily be overlooked as a kind of *deus ex machina* utilized by Stephenson in order to intervene in Nell's life. The *Primer* is often used to solve the inextricable problems that arise from moving her from a powerless, abused child to a full-grown master of the world. As both narratives progress, the problems and potential pitfalls of Nell's actual textual world are almost too conveniently solved by and within the textual world of the *Primer*. This is why, if examined only superficially, the narrative in *The Diamond Age* can appear to be little more than a Dickensian *bildungsroman* with the *Young Lady's Primer* relegated to a plot device. However, the narrative of Nell's coming of age in her material world does not end in her assuming a wholly individual and mature identity – both psychologically and physically speaking. Instead, she ends up assuming her role depicted in the textual world of the *Primer*: Princess Nell, the royal leader of the Mouse Army. At the end of the novel, her identity is not separate, but merged with her technologically and textually constructed identity in the *Young Lady's Primer*.

The confluence of Nell's real and textual identities within the universe of the novel indicates her metamorphosis from a strictly human construct into a posthuman one. N. Katherine Hayles defines the posthuman subject as "an amalgam," or "a collection of heterogeneous components" that form a "material-informational entity" (*Posthuman* 3). In essence, Nell becomes part of a system that comprises her as the material element and the *Primer* as the informational construct. There is an entanglement of the technologic with the biologic subject. Nell's subject position, in regard to the device, shifts as the roles and boundaries that define each "undergo continuous construction and reconstruction" (Hayles, *Posthuman* 3). This shifting construction, which continually negates and reaffirms Nell's agency, provides no a priori way to distinguish Nell's self-will from the other-will of the *Young Lady's Primer*. The boundary that clearly should separate woman from machine is blurred, so that there is difficulty discerning when the data is made flesh or when the flesh is made data.

Nell's ascension to the posthuman is perhaps why Brooks Landon feels that *The Diamond Age* is the culmination of what Ezra Pound called *New Paideuma* and what Landon refers to as *Nano Paideuma* (142). According to Landon, a *Nano Paideuma* is an expansive and sweeping change in educational assumptions, based on rapid technological advances, that leads to a new type of augmented learning and, consequently, a new civilization as well (141). For Landon, the *Primer* is "the ultimate electronic text, a kind of pedagogical Turing Machine that by itself provides a nearly complete interactive education" for the student (141). Landon is not far afield in this assertion, since the *Young Lady's Illustrated Primer* both revolutionizes Nell's life, by lifting her up from the slums in which she was born, and also permits her to transform the world in which she exists. If this "Propaedeutic Enchiridion" is the realization of *Nano Paideuma*, then it also stands to reason that the device must be a manifestation of *the* hypertext *par excellence*.

Of course, hypertext fiction is not without weaknesses. In order for the *Young Lady's Primer* to be the penultimate example of the form, it must strive to overcome its inherent weaknesses. With the multiple reading paths hypertext fiction provides, along with the indeterminacy of those paths, there comes a high degree of fragmentation within the narrative structure. This often leads to ambiguities and/or contradictions that jar the reader and calls attention to the artifice of the hypertext's representation. For instance, the story of Princess Nell in the *Primer* and the story of Nell in *The Diamond Age*, do not always fluidly parallel one another. Nell even remarks, at one point, that she feels the *Primer* misled her to "suppose that killing Burt would be a simple matter, and that it would improve my life" (281). This innate weakness in the *Primer*, and in hypertext fiction in general, is negated in the novel by the fundamental purpose of the book itself. The *Young Lady's Primer* is designed to call attention to the artificiality of all social constructions, including itself, in order to instill subversive qualities in the reader. If the reader did not question the devices authority, it could not fulfill its objective.

Thus, the *Primer* uses its own weakness as a tool to reinforce its purpose, and it certainly achieves the desired effect. Over time, the discontinuities grow more pronounced and Nell must acquire a "knack of translating [the *Primer's*] lessons into the real world" (282). According to Sherryl Vint, the contradiction between the representations provided by the device and Nell's actual social experiences allow Nell to resist the subject position that the *Primer* is attempting to instill (143). The rift created between material and textual reality provides a space for actual agency, which allows Nell to resist the call of ideology and articulate the reverse discourse (143). Of course, this is the purpose of the text: "the systematic encouragement of subversiveness" in order to create "the embodiment of the Victorian establishment" (Stephenson 365, 83). Nell is a subversive force that still provides stability in a turbulent world.

Another weakness the *Young Lady's Illustrated Primer* addresses is the self-contained nature of any constructed textual universe. Current examples of hypertext fiction such as Shelly Jackson's *Patchwork Girl*, and indeed all modern print fiction, do not expand or adjust according to external forces such as changing user needs. The text remains in stasis after its initial construction. Although the *Primer* is physically static, its internal informational architecture is not. Hackworth specifically designs the *Young Lady's Illustrated Primer* to perpetually educate the reader and, consequently, it is an immense and methodical compendium of knowledge contained within an ever-expanding hypertextual system "so fluid that it continually rebuilds itself" (Ryan 14). The architectural design of the device allows it to develop progressively into a massively networked hypertextual construct that connects to the entire fictional world. All events, every person, and every conceivable bit of digital information eventually become entwined and enlaced somehow within its narrative framework. Even the title of the novel does not escape its influence. The *Primer* is designed to be a multidimensional, de-constructible text, a work in perpetual movement, which is not a single object but "a matrix of many texts and a self-renewing entity" (Ryan 14) As such, the book becomes a totalizing vision of a narrative that contains all other narratives while still providing a continual invitation to explore all aspects, or any aspect, of the structure *ad infinitum* (Ryan 14).

Nevertheless, the primary weakness of all hypertext fiction is alienation, and it is an obstacle the *Primer* never satisfactorily overcomes. This alienation, or estrangement from the text, is an unfortunate consequence of granting the reader partial agency. By making a choice, the reader is never allowed to forget they are participating in the ongoing construction of a textual, and thus artificial, universe. As Marie-Laurie Ryan argues, "even when narrative coherence is maintained, immersion remains a rather elusive quest" because of the active and dialogic role the reader is required to undertake (20). According to Ryan, hypertext fiction

requires the reader to "assume an external perspective on the worlds of the textual universe" (20). As Jay Bolter succinctly puts it, "whenever the reader comes to a link and is forced to make a choice, the illusion of an imagined world breaks down" (138). Paradoxically, the text forcibly excludes the reader from the narrative by including the reader's choice.

The only effective way to avoid this potentiality is to collapse the representational discontinuity provided by the juxtaposition of texts. Nell must accept and assume the role of Princess Nell in her actual material reality in order to remove her confusion about "why she'd been put on the earth" and rectify her concern that her life was "a meaningless abortion" (Stephenson 478). Nell's merger with Princess Nell makes it impossible for there to be any estrangement from the text. However, there are also consequences of this unification. Nell in the textual world of *The Diamond Age* is now just Princess Nell in the *Primer*. Her material reality, which once extended beyond the scope of the *Primer's* characterization, is now completely defined by it. By the close of the novel, Princess Nell has subsumed the entire identity and being of Little Nell. N. Katherine Hayles defines this as reflexivity, or "the movement whereby that which has been used to generate a system is made, through a changed perspective, to become part of the system it generates" (*Posthuman* 8). Nell's alienation from the text is avoided by excising her from the novel.

Unfortunately, this character assassination damages the integrity of the novel's universe for us as readers. By breaking the perceived boundaries between Nell's material reality and the textual world of the *Primer*, the illusionary coherence of the imagined world of the novel shatters. We, as readers, instantly note the ambiguities and the contradictions inherent in this closure of the narrative frames and the artificiality of its now unified depiction. *The Diamond Age* attempts to compensate for this by providing a strictly delineated and linear structure that clearly foregrounds its artifice by segregating the narrative of the novel from the *Primer* through

the differentiation of fonts. By maintaining a static textual account of a mutable fictional hypertext fiction, *The Diamond Age* preserves its coherence and stability through brazen acceptance of its artificiality. Even though the contradictions and ambiguities still exist by ending the narratives in a singular, unified way, the inconsistencies no longer affect us, as the readers, because they are anticipated previously and already accepted. This leaves the *Young Lady's Illustrated Primer* to remain as a perfect hypertext fiction within *The Diamond Age*: a multidimensional text that is fully interactive, fully adaptable, and fully inclusive of the totality of the textual universe in which it exists, as well as completely and totally immersive.

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