THE MINOTAUR PROJECT

Part One.

Writing the Digital Body,

A Textual Close Reading

By Sarah Townsend

ARS RHETORICA

What I offer here is a literary "close reading" of a digital text. By this I intend not only the recovery and reinvention of pragmatic New Critical methods of reading displaced by subsequent trends in literary theory, but also a more reflective application of scholarly tools to "new media works." The electronic piece I focus on here demands just such particularized attention from its reader. *The Minotaur Project* itself profitably retreads historical literary ground, weaving familiar mythological and thematic material into an ingenius web of signification. As a controlling principle, White engages a central dialectic: between organic body and machine body, between self and creature, between materiality and informational patterns. My work responds to her text by way of traditional literary tools and, I hope, does the author's work justice by considering the digital as literature. This entails querying the text's material form along with its content, or what N. Katherine Hayles terms its "informational patterns." In the end, my interest is as much pedagogical as it is critical. My larger goal is toward teaching the text, toward the two-fold craft of reading and writing in the hypermedia realm.

INTRODUCTION OF THE TEXT

We commonly consider information abstract, quantifiable, and divorced from matter, and in so doing privilege it above its material instantiation. Media theorist N. Katherine Hayles critiques this trend in contemporary thinking that splits information from its material context. According to Hayles we see a dichotomy where we should instead see a productive and intriguing dialectic.1

Kim White's *The Minotaur Project* (http://www.home.earthlink.net/%7Etheminotaurproject/), a finalist for the Electronic Literature Organization's 2001 poetry prize, innovatively explores this dialectic between materiality and virtuality. Through the disembodied electronic medium White constructs a patchwork portrait of her embodied self. Through the substantial matter of words, images, and sounds she gives form to her most diaphanous thoughts on identity. Through the trying-on of particular literary personae she performs the transformations of craft. And through the materiality of a poet's metaphors she revealingly engages an array of meanings only indistinct and latent at the outset of the work.

PEDAGOGY: TOWARD READING

As a literature that blends multiple "literacies" (visual, media, and print-based/Literary, to name only the most obvious), hypermedia works chart an aggressively exploratory course. In the process of such innovation, the resulting text can present a formidable edifice. A matter of some importance becomes: How do we read the hypermedia text? And, perhaps even more poignantly, how, and where, do we teach it? For my

own pedagogical purposes, I propose for this hybrid form of writing a hybrid classroom, combining diverse disciplinary tactics and skills: the high-tech literary workshop. Although I don't believe in artificially splitting reading from writing in the classroom, for the purposes of clarity here I'll begin by addressing reading.

The text that instructs

The Minotaur Project defies traditional linear readings—not only does the structure itself suggest traveling multiple possible paths, but the "content" of the poem itself begins before the traditional poetic "stanzas" do: the index page, an element unique to electronic interfaces, is itself integral to the work's content, delivering descriptive information even from the poem's outset. The index page presents a visual field whose meanings are thematically evocative if not specifically legible.

> Adding to the language codes we already know, hypertexts occur within and help construct their own semantic codes. Their rules may differ from those formulated by texts in print, but hypertexts also ask readers to dwell within some imaginary rules for a time.
>
> Nancy Kaplan,
> "Literacy Beyond Books"

Within a flesh-toned ground some central wound or orifice lies all but concealed by the pattern of the gauze's weave. White reveals in private correspondence that this central image is a human navel, which further plays on notions of origination and identity, but even without absolute certainty about the anatomy beneath the gauze, we can read from the image the narrative and associative matter elaborated elsewhere in the poem: a body in repair or transformation. Even prior to the cantos themselves, the poet sets in motion with graphical imagery the metaphors she'll be employing later. In this sense the digital object transgresses the bounds of the "poem" as we might traditionally conceive of it, and in these and other ways "reading" the piece becomes a process that instructs as it evolves through execution.

Crafting the reader

In order to yield most fully, a hypermedia text like Kim White's *The Minotaur Project* demands from its reader a sustantial time commitment—and one we're perhaps unaccustomed to making in the realm of digital media. Web use and electronic media more broadly are nothing if not defined by speed and ease of consumption; simply cast a glance over the language that predominates the field: the Information Superhighway, Macromedia Flash, and so on. "Digital" to a contemporary audience means hot, happening, now. At first glance, not the most conducive conditions for the delayed gratification of a methodical approach. And yet, hypermedia literature follows the precedent of its print-based forbears in richness of rendering—and hypermedia authors craft for no one so much as an attentive audience.

In addition to sustained attention, the hypermedia text demands from its reader a certain flexibility of mind: the willingness to learn from the text itself how best to read it. Unlike a paperbound volume, here we're confronted with media that, to some extent at least, resist traditional reading practices: they are dynamic, shifting; there is noise as well as motion; even the text on the "page" does not stand still; and more often than not the "story" is nonsequential. As an avant-garde art form, this defiant stance is nothing new. Experimental works in any medium construct their own modes and means of signifying as they go. But the avant-garde implies an elite audience. For those of us unwilling to relegate literature of any form to the fog of obscurity, it behooves us to construct a tactical pedagogy: a system of exploration and explication that strategically introduces—but does not reduce—complex texts.

Literary studies scholar Robert Scholes recommends such an approach in his most recent volume, The Crafty Reader2. While he doesn't take up the question of hypermedia works in particular, much of what he says about the teaching of that other quite often arcane and hermetic genre, poetry, applies just as well to digital texts. Scholes frames his argument within the legacy of New Criticism, offering at once a critique and a suggestion for use. In spite of the New Critics' belief in poetry's pinnacle importance and their substantive contributions to reading practice, the New Critical heritage, Scholes argues, has resulted in poetry's systematic and calcified relegation to the cultual periphery in this country.

In a word, Scholes identifies this alienation as resulting from the production of fear in readers. Broadly, New Critical approaches to the Literary outlined a system of valuation that manifested in ferocious condemnation of works of insufficient rigor and "taste"—a taste, Scholes suggests, thinly veiling scorn for the popular, public, and oftentimes more "feminine" forms of writing. In essence, New Critical prose, in both critical publications and textbooks, tended toward correction of bad taste. Beyond this qualitative influence, Scholes notes, New Criticism also set in motion the use of a variety of analytical instruments that served only to distance the text from the reader; students, put on the spot to identify literary features such as theme or mode or irony, were inevitably distanced from the text. From a piece of communication, the literary work was transformed into an academic object. The poem became the site of uninspired inquiry, divorced from lived experience.

Scholes suggests reviving the potential and remedying the ills of New Critical approaches for contemporary readers. A New Critical close reading can yield substantive benefits—when coupled strategically with an attention to rhetorical purpose. Beginning with an awareness of who is speaking and to whom and to what purpose and in what context, explicit textual understandings such as theme and irony emerge organically, without the distancing that imposing definitional tools on the activity of reading occasions. Instead we prompt students—crafty readers—to approach texts first as human beings, bringing to bear the particular genius for understanding situation and story unique to each.

Last, but not least, comes a consideration of the form of the text. Given a rhetorical groundwork, detailed scrutiny of the technical aspects (linguistic, programmatic, graphical or otherwise) of a work serve to root a broad-based understanding in specifics. In a medium in which techne is particularly complex, experimental, and at issue—as in hypermedia works—the diligent reader can hardly justify neglecting such material examination. I, therefore, take Scholes' caution to heart, particularly for teaching purposes: to leverage technical, literary knowledge in service only of a more human, and humane, interaction with a text as a form of communication crafted by a person.

PEDAGOGY: TOWARD WRITING

The digital writer's craft

Digital authors face a two-fold responsibility: constructing an intuitive, technically adept navigational (communicative) system for the user, and at the same time pushing their own literacies beyond print-based habits to discover new ways of making meaning. Working in "new media" means manipulating multidimensional technologies so as to employ the specific potentials inherent in them. For instance, sound authoring allows craft and communicative possiblities in a dimension entirely removed from linear, visual text; access to a varied color palette opens up a range of options untapped in monochromatic constructions; animation allows for kinetic and dynamic semiotics; and so on. Crafting a multimedia text that leverages several of these sub-media simultaneously must be at times a boggling and alien means of conveying meaning.

> *In the digital medium layers of meaning can be given a physical treatment in the actions of veiling and unveiling. The idea of something hidden below the page that can be found out by physically roaming around the space.*
>
> (White, email)

For White, summoning the ancient helps to ground the new. She calls up the metaphor of ritual motion to link the past with the contemporary: "In order to unveil the image and activate the chanted dualities [in Canto I], the reader must move the curser, a minute finger action akin to counting prayer beads." Where manipulating Buddhist or Catholic devices of observance summons spiritual insight, handling the computer mouse in this case“unveils”another sort of enlightenment. By degrees a suggested construct emerges: a cyborg ear and its dualistic associations, audibly echoed by narrated binaries. Piecemeal revelation is necessary to express a thing continually in flux—the contemporary human/machine connection—and its understanding resists precise expression, yielding instead to revelation by intuition and allusion.

The craft of the author is a delicate and deliberate project. White notes that for her the composition process of digital work is fairly organic, as she tries to “grow [the text and multimedia elements] up together as much as possible." For this reason it’s important to consider *The Minotaur Project* as an integrated whole that refuses to privilege one mode (textual, graphical, etc.) over another. Where some electronic works start out as print texts and are later adapted to the digital platform, White's work began its existence as a hybrid-media text. What White and digital authors like her are attempting to construct is an entirely new literary form whose various multimedia elements contribute as significantly as does text, are necessary to the logic of the whole.

Some thoughts on the digital writer's tools

Throughout the text of *The Minotaur Project* White mines the terrain of the sensate human body (ear, eye, tongue, fingertip) as material for describing the complex and ephemeral concept of identity. Not only does the digital composition itself serve as the material ground for her exploration, but her choices of metaphoric elements—for example the fingerprint/tip as the bodily point at which unique identity is instantiated—illustrate the dialectic between body and spirit.

Tactically, she employs her available toolset to augment her meaning: narrative technologies the reader navigates through active use of eyes, ears, and fingertips to experience ideas that cannot exist without their material embodiment. A text-based poem relies on a virtual call to the senses through descriptive language; within the digital environment this conventional application to the sensual world becomes all the more palpable with graphics and animation. As a means to

> *I usually write first. Before the writing is finished, I begin to incorporate visual art and animation. When the text and images comingle, the writing begins to evolve. My goal is to find ways to make image and text utterly dependent on each other. Image should not be mere illustration for text, it should play a role that the text absolutely cannot. The idea is to make sure the visual art, the sound, the movement, and the interactive elements are saying things that the fixed poem cannot say.*
>
> (White, email)

understanding digital composition within the continuum of literature generally, I propose examining the writer's tools and how they translate to the digital environment.

In terms of the traditional act of writing, pen and paper or keyboard and screen are usually about as far as customary identification of tools goes. Hardware.

Let's add to this list the "soft" tools: the ancient technology of the alphabet; grammar, vocabulary, and syntax; the wealth of accumulated literature, associative and fleeting, that resides in the writer's head. When we write, we summon, often half-, if at all, consciously, myriad resonances from foregoing literate experiences: what we've read in or out of school, oral narratives passed on to us, themes we've partially broached in our own writing past. A nearly infinite number of particular influences and resonances, of course, contribute to a writer's perspective in more individual ways, but for my purposes here I'll restrict my list to things that I might generalize as "tools": pen/paper or keyboard/screen, language, and literature.

Then I need to expand this rudimentary toolset to accommodate digital composition. What indeed does it mean to "write" digitally? Taking the specifics of *The Minotaur Project* as a test case, we might extrapolate a variety of tools.

First, to name White's traditional writing tools: keyboard/screen, the English language, Greek mythology and Dante. In order to construct her electronic piece, however, she needs further equipment and capabilities. The Flash program is the most obvious, encapsulating within it an array of sub-tools or literacies—for example, the technical facility with layers and palettes established by Flash's software predecessors like Photoshop, as well as a related spectrum of image-manipulation proficiency.

On a fundamental level using a technological tool like Flash also demands a general fluency with the multi-tasking windowed environment introduced by the Mac OS and transparent to the PC user today. Computer literacy as a whole in fact reads like an archaeology of accreted knowledges that become invisible through use—the ability to "mouse" around the virtual graphical environment, to think at once sequentially and across multiple simultaneities, to infer a whole page or progression from a screen's worth of displayed information.

This analytical process of breaking computer proficiency down into sub-literacies could go on at some length; in the same way we could enumerate the soft tools of traditional literacy exhaustively: argumentative logic, socioculturally-specific humor, and so on. I'll confine my list here to generalize Flash's sub-tools: image- and text-editing and animation construction capabilities.

Beyond this level of software and computer technological literacy, though, there lurks yet another layer of meta-tools necessary for the construction of a multimedia piece—I'll call it simply "media literacy." By this I mean familiarity with the conventions of film, television, music, and other products of the entertainment industries, a pervading awareness that produces the capacity to frame a shot, fade a scene, or appropriately integrate sound with visual effects. Media literacy combines with computer literacy and traditional textual and literary literacy to produce the intellectual tools of the digital writer.

Writing the mind with the body

Given digital authors' investigations into new modes of writing, I wonder how the composition technologies employed dictate the compositions produced and, more to the point, what knowledge is gained

> ***How can I know what I think until I see what I say?***
>
> Graham Wallas,
> ***The Art of Thought***

through the interaction with the particular media. As Hayles reminds us, channelling McLuhan, that the medium is organic to the message: *The Minotaur Project* would in no sense be *The Minotaur Project* were it comprised exclusively of its text elements. If we consider the writing act to be a functional process for learning, how then does the learning change as the process changes with new tools?

Composition theorist Janet Emig has described how writing operates heuristically by engaging both hemispheres of the brain at once. She compares composition to the three other traditional "languaging processes": listening, talking, and reading. Only writing constitutes a developmental vehicle that combines simultaneously enactive, iconic and representational levels of cognition. According to Emig, writing exercises the widest spectrum of human cognitive capabilities3: writing transforms experience by shaping the symbolic system of verbal language into the iconography of text, which is in turn enacted by the hand in transcription. She further notes the unique learning benefits of writing's cognitive feedback loop, making what is known "immediately and visibly available."

Hayles4, in turn, writes of the "proprieceptive" functions of computer-use, whereby the hand-eye engagement of employing the mouse to accomplish ends within the field of the monitor's terrain generates a similar physiological feedback loop. She cites the tool use of seasoned tennis players, whose facility with the racquet transforms it into an extension of their arm, and suggests that literate computer users engage a similar bodily extension by moving the mouse, an activity they eventually internalize.

> *The thing that makes e-literature interesting, in a cultural sense, is that the public has been trainging their looking/reading skills to the commercial formats of computer screen, television screen and movie screen. Electronic literature attempts to define a literature that exist in this medium but offers a deeper, more complex experience than popular culture products do, while at the same time trafficking in the same concerns using the same pacing and mixture of visuals, sound and text.*
>
> (White, email)

Given the conjunction of Emig's and Hayles' descriptions of the bio-psychic activities of writing and computer use, how much more cognitively developmental might we consider writing with digital tools. Electronic composition as undertaken by White conceivably harnesses these developmental feedback loops even more elaborately in the employment of constructing literal graphical images and animations. In order to compose multimedia applications, the author performs the enactive, iconic and representational mechanisms even more intensively than is possible through textual signifiers. Digital composition, in effect, offers a writing medium that more concretely employs verbal, graphic and dexterous capabilities, standing to shape our ways of thinking in multiple dimensions.

THE DIGITAL REDEFINING LITERACY

Cumulatively White composes, through her text, a self for her reader to navigate and discover. Ordinarily by "writ-

ing" we mean the expression of ideas through textual signifiers, but as my discussion above has suggested, the digital writer's productions also incorporate the increasingly imagistic gestures of our contemporary culture.

As Hollywood, MTV, and the Web all trump their less graphical forebears, our sense of writing expands to consider visual iconography as a representational alphabet akin to text. As regular people ingest technical discourses and material techniques of film and television, our definition of literacy must evolve to reach beyond traditional alphabetic literacy. The more we "read" a multi-dimensional and multi-layered text of images and sounds as well as language elements in our diverse, multiply mediated world, the more fluently capable we become to "write" using these same diverse and complementary literacies. This evolution to a writing that is more visual and animated has a number of intents and effects.

Questions of Interactivity

Early on new media critics focused their discussions of hypertext interactivity on the function of links.5 Many of these theorists contended that hyperlinks draw the reader to into a more collaborative construction of the text, providing a multiplicity of paths through the material for the reader to navigate.1 It seems clear that multimedia works like *The Minotaur Project* invite a thorough-going reevaluation of hyperliterature interactivity.

As I've described, Flash allows the writer to compose a cohesive narrative object that combines image, sound, animation, and sophisticated text effects. Early-adopters of digital writing programs employed the technologies available to them, for the most part text-heavy environments like StorySpace. Of course, with each year that passes, computer users—both those who consume and those who produce digital texts—grow increasingly sophisticated, as do the tools at their disposal. People continue to experiment with different approaches to making digital literature "interactive": from collaborative story sites on the Web and projects that join forces of poets and programmers to text algorithms that generate "custom" pieces on the fly according to user-defined parameters.

Our notions of literacy, media and otherwise, are undergoing rapid revision and reinterpretation—and as tools continue to develop and people to push on the technologies at their disposal, we'll continue, no doubt, to see a collapsing of the boundaries that separate "literature" from "art" or "animation." In the course of this progression, and with works like *The Minotaur Project* that more actively engage the body to "make sense" of the material presented, I'd like to suggest a different notion of interactivity: one in which the sensory physics of the body joins with the analytical and creative capacities of the mind to create a deeply engaging textual experience.

Mass media products tend to rely on "push" technology (consumption)—we watch movies and television largely passively, commonly for the pure enjoyment of escaping reality. White notes a potential for interactive multimedia, a technology in which the user "pulls" information to her, to co-opt the techniques of film and television for literary production, an undertaking little mined in traditional literature.

White envisions for hypermedia literature an activist agenda: to reclaim the technologies of popular culture for the purposes of the literary arts. Just as educational multimedia ("edutainment") leverage the engaging principles of cartoons for learning, electronic literature concocts a hybrid literature that draws on reading modes inherent to more popular contexts.

Loss Pequeño Glazier6 draws a distinction between the digital writer's conscious troubling of her media and traditional literary practice which he suggests tends to assume the neutrality of its technologies. Technological literacy critic Cynthia Selfe7 questions the "naturalization" of technology, and Christina Haas8 stresses, "literacy practiced via print is no less technological than is literacy practiced via electronics." She adds, however, that in their ubiquity "books can appear to be non-technological."

Because digital media are newer and consequently less naturalized, the artificiality of their device is more apparent to us. Digital media writers trouble the transparency of literary construction by rendering it opaque: electronic compositions like *The Minotaur Project* foreground both the technologies of production and what Glazier, drawing on a tradition of language poetry, terms the "materiality of language" itself. Glazier notes that in throwing naturalized processes into relief, "e-poetry engages economic, ideological, and social factors," pursuing larger society's questions.

In the case of White's construction, the digital realm is at once an appropriate and a troubling medium for investigating the author's ambivalences about her cyborg hybridity in contemporary culture. The migration of poetry in particular—an artform historically rooted in, indeed synonymous with, humanism—to a technological platform calls forth common anxieties and fascinations regarding human being meeting machine. And yet how better to address that anxiety than through the materiality of the medium employed? Digital poetry, with its literary tradition of summoning sensory perception in order to mobilize ideological questions, offers perhaps the most appropriate means of answering Hayles' call for attention to both the informational patterns and their material expressions. *The Minotaur Project* examines the "condition of virtuality" through both thematic and concrete means, and the result is a whole new breed of literature and literacy.

CLOSELY READING THE TEXT...

Canto I: Ear

White presents *The Minotaur Project* in four cantos, each of which plays off of one of the human sensory modes. The first canto, "The Cartesian Chant of Making," addresses hearing, offering a sound collage layered over verse text on top of a patchworked and partially revealed graphical image of a human ear. Both sound and graphics reveal themselves to the reader piecemeal in response to the motion of the mouse. The verse text instead plays in lines across the page from beginning to end in a steady loop until the reader chooses to close the page or return to the main menu. The background graphic depicts a human ear stitched onto a flesh-colored and yet inorganically-textured ground, white stitch scars reminiscent of Frankenstein's creature.

In the course of email correspondence about the piece White clarifies my initial read of the image: what appear to be stitches are in fact soldering marks on a circuit board, the ground into which she has inte-

grated the human ear, accomplishing the digital echo of Mary Shelley's construction. The overlay of sound in Canto I consists of a set of binaries narrated by an androgynous voice, sometimes more typically femininely pitched, sometimes lower and more masculine. Quietly and insistently it chants irony upon contradiction: "I am code, I am chaos; I'm one, I'm zero; I'm man, I am machine; I am pattern, I am noise; I am logic, I am intuition," and so on and on, a pair of incantatory dyads corresponding to each of the 36 image tiles that make up the background graphic. The only constant on the page is a central patch of 1s and 0s, representing, presumably, the binary substructure of computer code— "constant" in that the patch itself never disappears altogether, but persists in internal flux, the 1s and 0s cycling like a machine in process.

Canto II: Eye

"Cyclops Me with My Only Eye" plays with the notion of sight and being seen. White translates Homer's monocular monster onto a digital stage—the photorealistic human eye blinking at the reader from the center of the electronic page glares in an inhuman hue of red reminiscent of the LED bulbs that signal the life inside our thinking machines. Epigraphic text opening the page describes this mechanism as cyborg combination of organic and mechanical:"forehead jewel rolled in saltwater/ nerved to the brain's chip, ticking/ [corporate] image bank." The brain, keyed by the eye, functions centrally as both nervous system and repository of the myriad signifiers of the marketplace, tell-tale anxiety in the shutter-click sound, the "ticking" blink of a mechanical thing overheated, ready, perhaps, to explode.

What is the source of such anxiety? One of the preoccupations of the postindustrial age as represented in futuristic media tales9 is the persistence of video reproduction and surveillance. In a society where television and video prevail, visual reality is perpetually reduplicated, played back to us in constant reiteration; within a consumerist and information-hungry culture image captures from hidden surveillance cameras empower department store detectives and governmental agents alike. Authors like Don Delillo (Mao II, White Noise) highlight the ways in which our contemporary lives are awash in a barrage of our own simulacra, while television shows like The X-Files posit a Panoptic world where power is wielded by those we can't see but who can, disturbingly and seemingly omnisciently, observe us. Michel Foucault has described the function of this surveying power to discipline.10

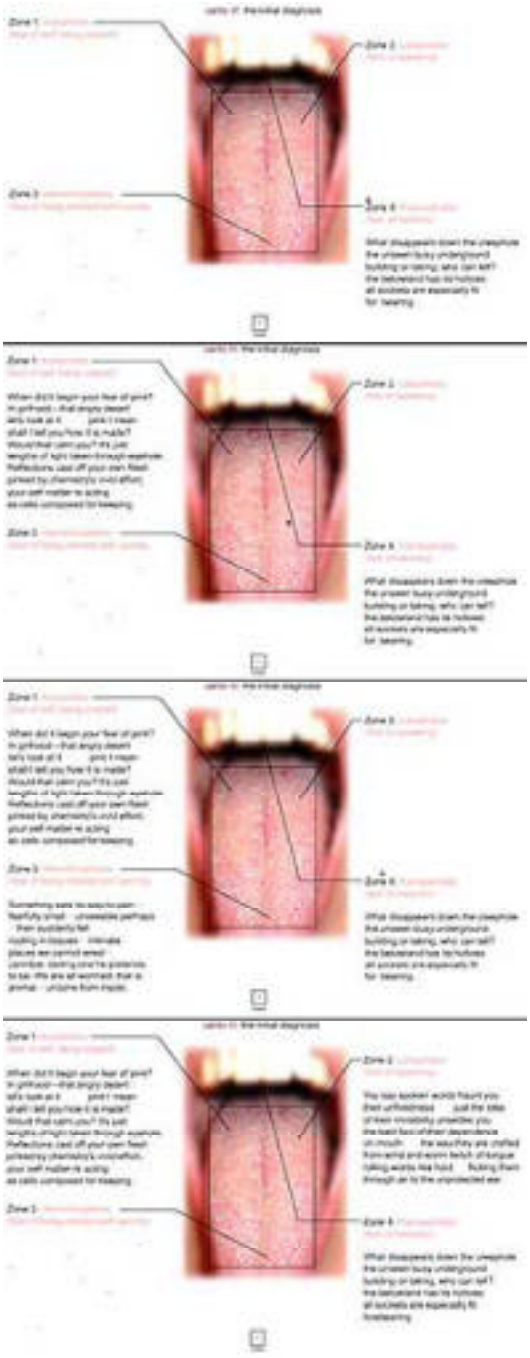
Canto II considers the subjectivity constructed by this collection of the body's data. The speaking voice issues from the Minotaur/cyborg and addresses the Kore persona of the poet: "I register undetectable thought glean/ with electric feeler/ I read you, everything about you/ is contained/ in data—/ therapist's notes—emo-

tions history/ doctors' measure of blood's pressure."The construing eye is at once inside and outside, the panoptic gaze internalized, as the material self is interpenetrated by the informational patterns of the digitized world. In a post-structural sense, Kore becomes the "measure" of the data about her, the "notes" and "measures" observed and recorded by institutional authorities standing in for identity. As the iterated object of this scrutiny she becomes subject to both evaluation and discipline. The examination, surrounded by all its documentary techniques, makes each individual a "case."11

The "monster" then is the self as interpolated by technology and its disciplining systems of measurement and evaluation. Integrating and interpreting ourselves via the media at our command cuts both ways: on the one hand allowing the construction of distinct identity, on the other hybridizing us such that autonomy apart from the machine is no longer possible.

Canto III: Tongue

"The Initial Diagnosis" elaborates the examination references of Canto II by outlining an array of phobia descriptions positioned around the central graphic of a mouth saying "Aaaaaahhh." Phobias constitute the institutional classification and pathology of human fear, once again discipline's interpolation of identity. The phobias named in Canto III play off of the central image of the mouth in a combination of visual and thematic ways.



"Autophobia" or "the fear of self, being oneself" keys off of the tongue's pink, offering an analysis in brief of pink as synecdoche for female identity.

"Zone 2. Laliophobia (fear of speaking)" dwells on the "unfixedness" of speech, and by extension of language itself, a recurring anxiety of those who write.

"Zone 3. Helminthophobia (fear of being infested with worms)" is preoccupied with issues of consumption and being consumed, a complex subject for the producer of a text.

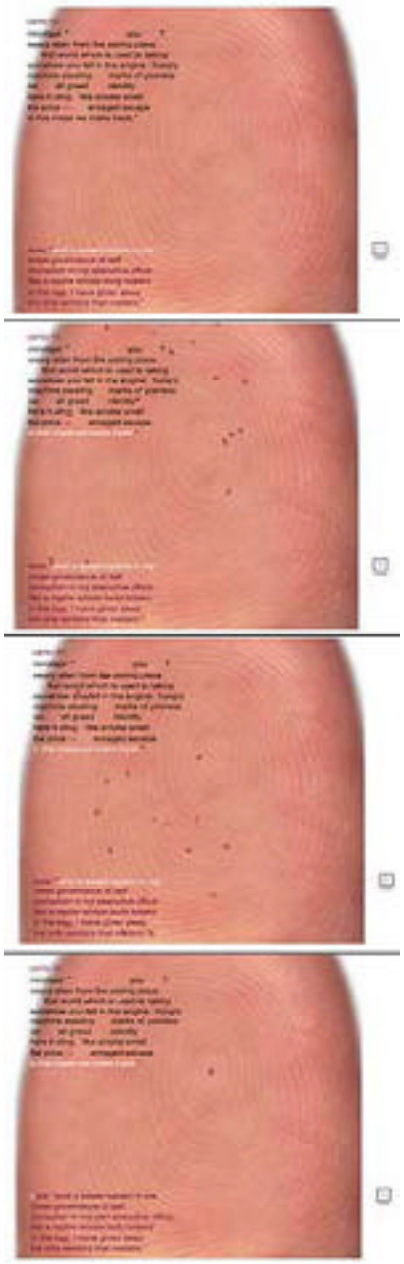
"Zone 4. Patriophobia (fear of heredity)" plays with the idea of an "underground" or "belowground"—at once the belly, the psyche, and Dante's underworld—and the questions of pregnancy in its many senses as a kind of colonization where "sockets" serve as human expansion slots.

Here, too, the technology White uses specifically constructs her composition's meanings on several levels at once. Digital animation allows her to foreground a play on the two senses of the homynym "forbearing" / "forebearing"—static text alone offers a limited means for expressing this duality, most common in contemporary poetry the use of

brackets or parentheses to surround the pivotal "e": "for(e)bearing." White's new media tools, however, allow her to elaborate this dual meaning, giving it yet further dimensions by causing the central "e" to tumble down the page out of the graphic throat. It is the act of speech specifically in this instance that accomplishes the transformation of emphasis from creation to endurance.

Canto IV: Fingertip

The work's final primary section rounds out the human sensory theme by considering the closeup of a fingertip. "In this maze we make trade" focuses on questions of identity as marked by the singular patterns of the fingerprint. Here White again employs her digital tools to inflect the text's meaning further than print would allow. The canto presents the two halves of a dialogue between the Minotaur and Kore anchoring the page at either pole. With animation White "lifts" a portion closing the Minotaur's utterance above, shuffles it and recombines it below as the opening to Kore's response. This anagram literally highlights the identity duality central to the poem, enacting it through the black letter fill of the words above flushing out of their typographic containers and spinning along the fingertip's whorls and into place in the words below.



This material animation questions the assumed neutrality of textual signifiers for conveying meaning, one of the prevailing projects of hyperliterature according to Loss Pequeño Glazier, Director of the Electronic Poetry Center at SUNY Buffalo. Problematizing the vehicles of language necessarily asks both how much the idea and its expression are one and also to what extent the two influence each other. If an element is not neutral, it must carry a charge. For White this "charge" is conveyed in the distinctive pattern of the fingerprint that rearranges the meaning of the canto's lines: bodily self and collected data react with one another to generate identity. In the course of this transformation, the "K" of Kore gets set apart at the center of the fingertip's own labyrinthine pattern, further reminding the reader of the play on Kore/core as a central embodiment of identity. Just as the mythological Kore's identity or "meaning" was constructed, shaped by her experience, so too is the speaker's. Mythological figures and the circumstances they face serve archetypically as investigations of themes at play in human lives, and here the analogous Kore undergoes identity-construction in the process of particularization. At the outset of her story she is a cipher—daughter to Demeter, but essentially void of signification of her own—until her journey into the underworld. It is through the ambivalent choices she makes (picking the narcissus, swallowing the pomegranate seeds) that a particular pattern develops that defines her identity and fate: the first choice accomplishes her abduction by Hades, while the latter defines the terms of her ongoing sequestration and, consequently, her mythological "meaning".

Foot Notes

1. According to Hayles, molecular biology and other information sciences since World War II have contributed to the collective, and naturalized, assumption that the theoretical and the physical are in some sense separable—a dichotomy which, she notes, "maps onto the older and more traditional dictotomy of spirit/matter." This hierarchical split has manifested in an array of Western traditions: from a Platonic ideal that proposes the immaterial essence superior to its physical counterpart to Christian doctrine which values the life of the spirit over that of the body to our contemporary Information Age where, for all our fascination with fetishistic electronic devices, it is data that ultimately rules. And as we promote information patterns to an immortal status, we hope to render them immune to the forces that decay physical objects—attributing to the spirit a life beyond the death of the body or preserving our data from destruction by duplication and distribution. Hayles reminds us that the split is artificial from the outset— information/ matter, data/machine, body/spirit, text/meaning: each cannot exist without the other. The ephemeral energy relies on its contextual framework and embodying substance, particularly in the case of present-day experiences of "virtuality."
(Hayles, K. (1997). "The Condition of Virtuality" in Masten, Stallybrass, and Vickers (Eds.). Language Machines: Technologies of Literary and Cultural Production: pp. 183-206.)

2. Scholes, R. (2001). The Crafty Reader. New Haven & London: Yale University Press.)

3. Drawing on the earlier work of cognitive psychologist Jerome Bruner, she outlines our primary means of representing and processing lived experience. (1) enactive—we learn "by doing"; (2) iconic—we learn "by depiction in an image"; and (3) representational or symbolic—we learn by restatement in words. To overste the matter, in enactive learning, the hand predominates; in iconic, the eye; and in symbolic, the brain. Emig, J. (1977) "Writing as a Mode of Learning," College Composition & Communication, 28.

4. Hayles, K. (1997). "The Condition of Virtuality" in Masten, Stallybrass, and Vickers (Eds.). Language Machines: Technologies of Literary and Cultural Production: pp. 183-206.

5. "Weighing link cues constitutes part of the cognitive activity of meaning making that we think of as reading… The selections aggregate into a kind of contingent interpretation of the text at hand."
Kaplan, N. (2000). "Literacy Beyond Books: Reading When All the World's a Web" in Herman and Swiss (Eds.). The World Wide Web and Contemporary Cultural Theory. New York: Routledge: pp. 207-234.

Kaplan does an impressive job of taking on both the arguments for and against hyperlinks' empowerment of the reader. She notes Myron Tuman's objection to their "invitation to click mindlessly along" and refutes it with a convincing case for the "deeper engagement with the text" links facilitate by fostering "reading twice": acting as signifiers that speak on both the literal verbal level and as meta-textual pointers, connecting resonances between different portions of the text. She also debates the simplistic generalizations that print new media critics leap to when expressing the innovative nature of hypertext, by reminding us that readers often engage with printed texts in willful and non-linear ways. On one hand Flash pieces may merely do more of the same—providing the reader with clickable hotspots similar to those that can be programmed in HTML or StorySpace and presenting a many-layered text akin to rich print literature for the reader to plunder at will. On the other hand, hypermedia works may move us toward a more truly embodied interaction between writer and reader.

6. Glazier, L.P. (2002). Digital Poetics: The Making of E-Poetries. Tuscaloosa, AL: The University of Alabama Press.

7. Selfe, C. L. (1999). Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention. Carbondale: Southern Illinois University Press.

8. Haas, C. (1999). "On the Relationship Between Old and New Technologies," Computers and Composition 16(2).

9. From Willy Wonka (1971) to Max Headroom (1985), The Truman Show (1998) to Pleasantville (1998), Hollywood has foregrounded contemporary culture's anxiety about the power of video to reproduce, and consequently render less human, human life. In other films like Blade Runner (1982) and Brazil (1985) the consequences of video use for surveillance becomes a more salient preoccupation than simulacra. But either way, video implies an onmiscient but not entirely benificent entity and mankind subject to its directional whim.

10. "Thanks to the techniques of surveillance, the 'physics' of power, the hold over the body, operate according to the laws of optics and mechanics… It is a power that seems all the less 'corporal' in that it is more subtly 'physical'."
(Foucault, Discipline & Punish:The Birth of the Prison. New York: Vintage.)

11. "[The case] is the individual as he may be described, judged, measured, compared with others, in his very individuality; and it is also the individual who has to be trained or corrected, classified, normalized, excluded, etc."
(Foucault, Discipline & Punish:The Birth of the Prison. New York: Vintage.)