Something to Imagine: Literature, Composition, and Interactive Fiction

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In interdisciplinary or discipline-specific writing courses centering on literature, students and teachers may find themselves engaged in an uneasy commerce between two very different academic cultures. Much contemporary composition theory describes writing as a process embedded in a social context where knowledgeable peers collaborate on evolving texts (Fulkerson, 1990). Literary theory, on the other hand, attends to completed works by individual authors who have been validated by publication and by their inclusion in a recognized canon or counter-canon (Lanham, 1989). When students in these classes read, they learn to interpret authorized discourses in definitive editions duly disseminated by commercial publishers. When they write, they learn to regard their texts as provisional and spontaneous, open to critique and revision and, with only rare exceptions, never to be published.

This polarity becomes all the more pronounced as student writers move from pencil and paper, through word processing, and on to *soft copy*, a technology in which writing no longer takes the form of fixed inscription but becomes instead a fluid, malleable, easily reproduced stream of electronic information (Balestri, 1988). The realm of print, where *writing* refers to a product fixed between covers and disseminated from producer to consumer, contrasts sharply with the electronic environment, where writing is understood as a process that necessarily invites change (Bolter, 1991).

But this split between reading and writing need not prove debilitating. When applied imaginatively, the same technology that presently exacerbates division can result in a new, interactive textuality. At Cornell University in English 165, a first-year writing course on the literature of fantasy, we enabled students to explore this mode of expression both as readers and writers of *interactive fiction*. Our experience is extremely limited, and we offer here only an anecdotal account, not a systematic investigation of this teaching strategy. But what we and our students discovered in working with interactive fiction suggests that this form of writing helps engage students in an encounter with literature, raising the possibility of a new community of critical and creative discourse. This community, whose conventions are not yet formed, can only be defined by a confluence of literature, composition, and technology.

Reading and Writing Technologies

The seventenn students enrolled in English 165 met in an *electronic* classroom equipped with twenty Apple Macintoshes networked with AppleShare™. The machines were arranged in an outward-facing ring so that students could easily converse, hold class discussions, write individually, or work in small groups. Both the course design and the teaching environment favored an approach to writing as a social process, allowing students to collaborate spontaneously in class, to share drafts through the network, and to embed responses in one another's files with PROSE, a commenting program.

But the literary content of the course, in which students read widely taught texts in standard editions, stood at odds with this emphasis on spontaneity, collaboration, and process. As readers of literature, students tended to find themselves passive receivers of an authorized canon, a set of static objects to be contemplated. They often seemed to think that successful contemplation must yield up monologic truth, so that novels and stories became ciphers to be solved for discrete kernels of meaning. In their essays, students often took a reductive approach: Many approached Mary Shelley's *Frankenstein*, for example, as a simple cautionary tale about the hazards of technology.

If we dismissed such interpretive weakness as a lack of literary experience or sophistication, we would be telling only part of the story. First-year students tend to treat texts in this way not only because they lack literary expertise but also because they regard any bound volume as a *program for reading*. The pages of a book are to be consumed as they present themselves, once through from top to bottom, first page to last.

Implicitly believing in the text's completeness, students locate meaning in the words printed on the page in front of them. Driven by their expectation of closure, the point at which all relevant information will be available to them, their textual dynamic tends to be simple and linear. Their daily practice with books contradicts literary theories in which a *virtual text* emerges from the convergence of reader and printed word. In such theories, the fleeting performance of the reading act constructs the work; in the classroom, however, the *virtual work* collapses back into the material text, the fixed and final word so palpable on the page. First-year college students seem to view their assigned reading not in terms of cocreation, but rather in terms of absorption or coverage.

In students' experience the literary object lies outside them. Literature challenges them to find the object, and, should they fail to find the right object, literature punishes them through the agency of the instructor, who acts as gatekeeper to right readings. Students are likely to regard even supposedly dialogic forms such as narrative fiction as instances of what Bakhtin calls (1981) "the authoritative word," a form of expression

> located in a distanced zone, organically connected with a past that is felt to be hierarchically higher. It is, so to speak, the word of the fathers. Its authority was already acknowledged in the past. It is a prior discourse. It is therefore not a question of choosing it from among other possible discourses that are its equal. It is given (it sounds) in lofty spheres, not those of familiar contact (p. 342).

Bakhtin argues that fiction liberates the reader from this monologic discourse. But he overlooks the fact that only some people are empowered to produce recognized, definitive responses. As readers of literature, students find the privileged past inaccessible because they are confined to a privative present. Interpretive communities consist of knowledgeable readers: Apprentices and other powerless persons need not apply.

Students in traditional composition courses have not fared much better in their role as writers. In recent theory, writing is viewed as an essentially social act, as indeed all utterances must be (see Vygotsky). Even those processes which seem most secret and hidden from view are dialogic and social at the core, interacting with prior texts to form new contributions to on-going conversations. Thus, LeFevre (1987) argues that instead of seeing invention as "individual introspection," we should conceive of it as "an act that may involve speaking and writing, and that at times involves more than one person; it is furthermore an act initiated by writers and completed by readers, extending over time

through a series of transactions and texts" (p. 1). This theory applies equally well to all writing, but like contemporary reading theory, it runs counter to students' practical experiences as writers.

In her work, LeFevre discusses chiefly those texts with recognized authority as conferred by their discourse communities, the same knowledgeable few who by defining appropriate readings also establish the askable questions, the viable arguments, the persuasive stances or moves. Most undergraduates have no standing in such a community. Gere (1987) attributes the disparity between social theories of writing and those textbooks that dominate composition instruction to a notion of the author rooted in "eighteenth century legal-economic arguments and aesthetic perspectives that spawned 'authorship'..." (p. 58). As she points out, the educational institution has largely excluded student writers from this definition:

> Strictly speaking, the term "author," based on aesthetic and legal-economic theory, applies to a narrow range of publicly recognized discourse and does not include student writing. Composition students, after all, are not concerned with legal and economic rights to their work, nor is the question of individual genius a central one in most classes (p. 62).

Students are not expected to exercise that mastery of the discursive code that constitutes originality or "genius." Assigned to interpret a literary text, they therefore produce unsuccessful imitations of authoritative strategies, essays on symbolism, conflict, or narrative structure, which show little understanding of these abstractions. Their exclusion from authoritative discourse all too often deflects students from real engagement with texts, denying them full participation in what Bruffee (1984) terms "the conversation of mankind" (p. 635).

Even if students were fully authorized, the concept of a collaborative writing practice seems out of accord with conventions of literary study. According to those conventions, knowledge is not developed communally but disseminated hierarchically. For novices at least, the nature of the material product (the book) severely restricts the virtual process (the act of reading). However, electronic writing offers the possibility of changing these conventions by altering the nature of text. Instead of a rigidly delimited stream of characters (a bound volume), the text may be constituted as a collection of passages arranged arbitrarily in electronic memory and provided with an indexing system that allows its elements to be assembled into a variety of sequences (a variable-access database). The textual database, when coupled with a program allowing users to explore and create links between passages, gives birth to hypertext, a system of writing that supports nonsequential

(the better term might be *polysequential*) discourse (Nelson, 1987; Joyce, 1988; Moulthrop, 1989; Slatin, 1990; Smith, 1991).

The Concept of Interactive Fiction

When writers make use of hypertext to produce fictional narrative, the result is interactive fiction, a form of writing which regularly calls upon the reader to respond in some way (e.g., by keying commands, highlighting a phrase with a pointing device, or touching a *button* on the screen). The hypertext program interprets these responses according to protocols established by the author and replaces the passage of text currently displayed with a passage linked by the author to the response the reader has given. The interplay of the reader's actions with the author's linking conditions thus determines the structure of the emerging story.

The idea of interactivity in fiction is hardly new. Though books are a poor medium for active, participatory discourse, authors have attempted to jar or cajole readers out of passivity since the beginnings of modern fiction. Laurence Sterne in the person of Tristram Shandy proclaimed: "Writing, when properly managed . . . is but a different name for conversation. . . . The truest respect which you can pay to the reader's understanding is to halve this matter amicably, and leave him something to imagine, in his turn, as well as yourself" (pp. 108-109). That declaration is disingenuous of course. Though Sterne's narrator often addresses implied interlocutors, and though he offers a blank page on which he invites the reader to sketch one of the characters for himself, no one would mistake Shandean monologue for true, two-way exchange. Genuine conversation, completely spontaneous and unconstrained, exceeds the capacity of any fiction, conventional or electronic. Yet this has not kept writers of books from working out a great number of literary devices that simulate dialogue with the reader. The inevitable failure of these printed devices sheds an interesting light on the later, technological efforts with which we are concerned here.

The most direct way to simulate interaction in a book consists of simple causal options, as in *Choose-Your-Own-Adventure* books and other series for young readers: "To get Frank and Joe into the investigation now, turn to page 8. To decide where the Hardys will pick up the investigation, turn to page 9" (Keene and Dixon, 1984, p. 6). This strategy allows the reader to produce a number of divergent story versions, each mutually exclusive. In theory at least, it should be possible to produce an extremely variable text in this way. But even when this manipulation of page sequence is applied with greater

sophistication, as in Julio Cortázar's *Hopscotch* or Milorad Pavic's *Dictionary of the Khazars*, the reader generally has freedom to choose only among a small range of variations on a discernibly central theme. Cortázar, after insisting that his novel consists of "many books," outlines only two recommended reading plans (p. 1). And while the elements of Pavic's "lexicon novel" can be read in any order, they are all related to a series of chronologically ordered plots which converge on one foregone conclusion, the extinction of the Khazars (p.).

The limitation evident in these experiments stems from the fact that they were produced in bound volumes. The fixed arrangement of pages always militates in favor of that automatic reading from first to last, which branching narrative attempts to subvert. Thus, the more intricate page-turning a text demands, the more conscious its reader is likely to become of the native sequence that he is being made to violate. Instead of liberating the narrative imagination, the technical difficulty of polysequential books instead is likely to emphasize the unnaturalness of their unusual procedures.

The visible sequence of discursive elements in a printed text, no matter how arbitrary, unmistakably signifies prior authority. As Fish (1980) points out: "A line of print or a page of a book is so obviously there—it can be handled, photographed, or put away—that it seems to be the sole repository of whatever value and meaning we associate with it. This is, of course, the unspoken assumption behind the word 'content'" (p. 43). But this limitation exercises much less influence over works produced in electronic media. Because the volume of an electronic text occupies the microscopic space of a silicon chip or a mylar disk, readers have no way of knowing what the text may contain or what arrangement it has within the contents. From the reader's point of view, an interactive fiction very closely resembles Iser's (1980) virtual work. Its order surfaces (so it seems) only in the act of reading.

The first electronic narrative to realize this innovation was ADVENTURE, a program developed in the early 1960s in the Artificial Intelligence Laboratory at Stanford University. The ADVENTURE program, which was conceived not as a literary experiment but as an experimental game, mapped an imaginary environment into electronic memory and allowed its player/readers to explore that space by issuing simple commands (e.g., *go north, get flashlight, kill troll with ax*). In giving these commands, the reader attempts to negotiate a series of spatial and narrative obstacles to reach some hidden goal. ADVENTURE became a favorite diversion of programmers and computer scientists, who built ever more intricate and challenging versions of the game (Kidder, 1981).

ADVENTURE and its descendants continued to evolve through the late seventies, when interactive text games migrated from academic and corporate mainframes to home computers. There the form was cross-bred with popular fiction and role-playing games to spawn a second generation of text adventures. Some of these projects involved recognized literary figures (e.g., Thomas Disch and Robert Pinsky), but virtually all retained the lucid, problem-solving design of the original ADVENTURE. The later text games were not networks of possibilities to be explored but arrangements of traps and obstacles to be overcome in an insistent drive to a goal. In Pinsky, Hales, and Mataga's MINDWHEEL, for instance, the reader is dispatched by a guide (Dr. Virgil) in search of a "wheel of power" that will "save the planet" (p. 65). Readers who fail to follow the right set of clues draw this response from Dr. Virgil: "Perhaps you are not the right one for this quest.... Whatever you did, it seems to have been particularly senseless for somebody trying to save a planet. Oh well, do you want to try again?" (Pinsky and Campbell, 1987, p. 66).

Later in the 1980s, however, interactive fiction entered a third generation, one in which the influence of game scenarios has been much less noticeable. The key to this development was the arrival of hypertext systems for personal computers, such as GUIDE™ from Owl Software, HYPERCARD™ from Apple Computer, and STORYSPACE™ from Eastgate Systems. This technological evolution for the first time has given writers direct control of the interactive medium, leaving them free to pursue more truly collaborative designs. The "multiple fictions" (Joyce, 1991b, p. 79) of the third generation are narrative networks capable of differing significantly on every reading, texts that do not vector the reader toward a single closure or solution but enable a multitude of outcomes.

In the mid 1980s, setting out to write a test file for STORYSPACE, the novelist and software designer Michael Joyce created a multiple fiction called AFTERNOON (Joyce,1991a), a production that marks an important evolutionary step for interactive narrative. Joyce's story invites the reader to circulate digressively among a matrix of characters and events that are never quite what they seem on first presentation. "I want to say I may have seen my son die this morning," an anonymous speaker confides, disclosing a rich field of narrative possibility. But the stories one can produce by interacting with AFTERNOON (in their millions of permutations) will not validate or disprove either the speaker's desire or his perception. Herein lies an innovation.

AFTERNOON is a mystery only in the older sense of the word, the sense of ritual or hieratic procedure. Instead of setting his reader problems to

solve, Joyce offers a text suffused with verbal associations. These associations are suggested by *words that yield*—words and phrases whose evocative resonance readers can pursue by using a mouse to highlight them on the computer screen. If the reader selects the word *son* in the sentence cited above, for instance, the text on the screen will shift to the description of a scene in which the narrator finds his son's school paper on "The Sun King". The word *die* in the initial sentence serves as the cue for a different narrative departure, and there is a third possibility, a default condition activated when the reader selects any word other than those singled out as special operators. These default transitions do not, however, simply reinstate the fixed page order of a bound volume. They are governed by conditions that refer to a record of the reader's encounter with the text and are thus subject to change. The default route from passage A may take me to passage B on my first encounter, but if I return to A after having been to B, the default may lead instead to passage C. Imagine a book capable of reassembling its elements in a different order every time the reader turns a page. This technique of reconfiguration has always been a part of interactive fiction; Joyce's contribution lies in the way he has explored its implications for narrative.

Because AFTERNOON is not built around simple causal sequences, it does not dispose itself in exclusive, parallel storylines, as polysequential books and games tend to do. A reader who embarks down the *son* path may eventually come back to the original sentence or wander into the same network of passages linked to the word *die*. Readers' experiences with AFTERNOON are thus considerably different from their experiences of either printed conversational fictions or electronic games. AFTERNOON invites them to enter the text not as silent interlocutors or agents of reductive order, but as participants in a fertile imaginative chaos, a field of discursive possibilities.

By insistently opening reading to collaboration and by refusing to constrain this collaboration within the limits of a bound volume or a game, AFTERNOON produces a form of discourse that closely approximates Bakhtin's (1981) dialogical ideal in fiction, "the internally persuasive word":

> The internally persuasive word is either a contemporary word, born in a zone of contact with unresolved contemporaneity, or else it is a word that has been reclaimed for contemporaneity; such a word relates to its descendants as well as to its contemporaries as if both were contemporaries; what is constitutive for it is a special conception of listeners, readers, perceivers (p. 346).

In interactive fiction, this "special conception" invites the reader to converge with the text not as a matter of reflection or interpretation but in an apparently contemporary activity. Although still dependent on a product (now hypertext instead of text), the work unfolds itself in a constructive transaction that requires more than just the turning of pages. AFTERNOON and other works of its kind offer no singular reading, nor is any one path through the text first among equals; but most important, there can be no reading at all unless the reader actively assists in shaping the narrative.

Interactive Fiction in the Classroom

As students and teachers alike discovered in English 165, this activation of reading does much to bridge the gap between composition and literature, creating a way to explore a literary text without subjecting it to interpretative reduction. The discourse of interactive fiction appears not in the habitual reading space—the book out there—but in students' writing space, the computer screen where their own composition and collaboration have been going on. Moreover, it appears not as a static object but as the invitation to a process, closing the formal divide between the literary opus and the work of student writing. These changes in the medium invited students into the literary conversation; thus involved and enfranchised, students found themselves rethinking their relationships to literary texts.

For two-thirds of the term, the class read, discussed, and wrote about conventional narratives of the fantastic, including works by Shelley, Huxley, Borges, and Dick. In the last third of the term, students received four interactive hypertexts: Michael Joyce's AFTERNOON; FORKING PATHS (1986), a construct built by Stuart Moulthrop around a story by Borges; CHAOS (1989-91), a multimedia piece combining text, sound, and animation, also by Moulthrop; and UNCLE BUDDY'S PHANTOM FUNHOUSE (1989-91), a more advanced multimedia narrative by John McDaid.

At the outset, students found the interactive fictions perplexing and problematic. In brief responses written after their initial encounters, readers characterized the texts as vast, irrational spaces apparently devoid of intention or coherence. A basic and unsettling question kept recurring: "How will we know when we've done the assignment?" Because there were no final pages to reach, no covers to close, and no empirical puzzles to solve, interactive fiction seemed to make indefinite demands on readers' time. Students could spend hours cycling through the texts without coming to any authorized closure, and even after exhausting virtually all permutations, they could still never be sure that they had explored every detail. One student remarked that having to

read FORKING PATHS and AFTERNOON was "probably the most challenging and frustrating undertaking of any English class anywhere."

In spite of their early skepticism, these readers rose to the occasion. Students spent as much time working with the electronic texts as they had reading conventional fiction, but notably they did much of their reading in ad hoc conferences, comparing strategies and trading critical opinions. On several occasions, students spontaneously extended class meetings in order to use the computer network in their classroom to demonstrate different readings, carrying on even after their instructor had to leave.

Readers were able to engage the texts so enthusiastically because their approach to fiction had undergone a significant change. Having no apparently privileged sequence, the interactive fictions could not be reduced to a single statement of plot, moral, or meaning. Students thus came to regard these texts as something other than an exercise in literary decoding. Contrasting interactive fiction to conventional literature, Andrew Sussman reflected:

> We have spent our whole lives reading stories for some kind of end, some sort of completion or goal that is reached by the characters in the story. . . .I realized this goal is not actually reached by the character, rather it is reached by our own selves. . . .[This completion] occurs when we have decided for ourselves that we can put down the story and be content with our interpretation of it. When we feel satisfied that we have gotten enough from the story, we are complete (1988, n.p.).

Sussman's new sense of an ending both echoes and revises the traditional understanding of literary closure, which Smith has defined (1968) as referring "not to a point at which the observer's or reader's experience is 'finished,' but to a point at which, without residual expectation, he can experience the structure of the work as, at once, both dynamic and whole (p. 36). Although Sussman's redefinition of closure seems to involve both dynamism and wholeness—both the reader's engagement with the text and the voluntary decree of termination that ends it—the dynamism of the process is far more important in interactive fiction than it is in printed narrative. Even when a particular reader declares her or his work complete, there remains a potential of further readings, and it is this residual expectation that makes interactive fiction such a powerful incitement to collaborative exchange. The form of this writing denies any statement the status of last word because it is one among many that may be produced by the reader's interaction with the text. Therefore any community of discourse built around interactive fiction must be open to many readings and many voices.

This invitation to collaboration and dialogue seems a welcome development from a pedagogical standpoint. It appears that interactive fiction, being large, can contain multitudes of both readings and readers. But a devil's advocate might point out that *multitude* and *infinity* are very different concepts, and that an interactive fiction is not after all infinite. If it is to be anything other than a babble of randomness and subjectivity, an interactive fiction must impose some limiting principle on its collection of voices. Being limited, an interactive fiction must leave something out, and it remains to be asked which multitudes are to be contained and which are to be excluded.

Print fiction avoids that question, and, in its earlier incarnations, interactive fiction did the same. The reader of a novel is not encouraged to speculate on what might have happened if the hero had died in the second chapter. The text adventurer does consider alternative narratives, but only as hypotheses to be tested on the way to finding the winning version of the story. Both of these narrative media conspire to keep the conditions of limitation unquestioned. The book is what it contains; the object of the game is to win. McLuhan (1967) called such "invisible" constraints in media "environments":

> Environments are not passive wrappings, but are, rather, active processes which are invisible. The ground rules, pervasive structure, and overall patterns of environments elude easy perception. Anti-environments, or countersituations made by artists, provide means of direct attention and enable us to see and understand more clearly (p. 68).

Interactive fictions such as AFTERNOON are "anti-environmental" in McLuhan's sense. They still subject their readers to a set of pervasive structures (the design of the particular hypertext and of the general program that supports it). But because they demand deliberate, elective response, interactive texts bring readers quickly to the boundaries of their own environment. By initiating a sharing of authority over the structure of the text, they specifically empower readers to ask how and why the narrative has been delimited.

As we have observed, neither conventional nor electronic texts can achieve true interactivity, which, strictly speaking, refers to a situation in which either participant may freely influence the behavior of the other (Brand, 1987). Interactive fiction provides a much more engaging simulacrum of dialogue than does print fiction, but it remains at best a simulation: The reader's personalized path is always contained within a predefined matrix of possibilities. The architecture of AFTERNOON constrains its readers far less than that of an adventure game or a printed novel, but it still leaves the reader with a limited choice among

words that yield. As the percipient Sussman observed: "Actually, the reader has less control over these kinds of stories [than the writers imply]; I felt that I was under the control of the ideas of the author . . . following the pathways established for me by the author" (p.).

Students noticed a similar manipulation in print fiction (for instance in stories by Borges), but Sussman's complaint about having to follow predefined pathways seems to belong uniquely to his encounter with electronic writing. Interactive fiction makes significant overtures to collaboration, requiring that its readers take an active interest in the development of a narrative sequence. If it then allows only a limited outlet for this interest by restricting the number of available sequences, it does not follow that readers will simply acquiesce. On the contrary, they tend to turn a sharper critical eye on the text before them (Douglas, 1989; Moulthrop, 1991). By raising the possibility of alternate constructions, interactive fiction considerably heightens readers' sensitivity to features of the narrative environment—issues such as point of view, the authority of the narrator, and causal sequence. A number of students wrote that their experience with interactive fiction retrospectively affected their understanding of conventional texts. Barak Cohen (1988) told his instructor: "Interactive fiction changes everything. You've been talking about how form contributes to meaning in the novels, but it wasn't until we got to the interactive fictions that I could see what you meant."

But this newly awakened interest in literary design did not merely make students more perceptive interpreters. A large number of students were so struck by the expressive potential of interactive fiction—and evidently so encouraged by its overtures to participation—that they became fictioneers in their own right. All students in the course had the option of writing interactive fictions as part of their final projects. Ten of seventeen chose to do so.

The assignment required students to submit both a short electronic fiction and an essay discussing their experience in writing it, which at minimum doubled the demands of the final project. Students who chose to write electronic fictions also (regrettably) found themselves working with hypertext systems that were extremely complex and without complete documentation. Yet they devoted considerable time and energy to their projects, some spending as many as twenty-five hours over three weeks. At the end of the term, four writers reported that their fictions did not yet contain all the material intended for them and promised to expand the projects after submitting the existing versions. Two of these students produced revised projects after winter recess, though they knew this could not affect their grades. A third

student later reported that she was beginning work on her second interactive fiction, outside of any course. She went on to say that though she had been uncomfortable with literature at the beginning of her semester in English 165, she now feels part of a community of readers and writers. Indeed, a number of students from the previous term's class showed up at the electronic classroom in January looking for their colleagues' new and revised fictions.

The student projects varied widely in content, approach, and design, representing widely varied interpretations of interactive fiction. Some of the writers adopted or parodied the second-person perspective common in interactive games. Some wrote first- or third-person narratives with a greater resemblance to conventional, realist fiction. The projects submitted included an interactive mystery, a lampoon of sword-and-sorcery adventures, a journal of divergent possibilities in which the writer projects for herself alternative life paths, and a web of variably intersecting stories evoking the consciousness of a multiple personality. A few of the fictions relied on binary choices and plot devices to generate alternate narratives, while others used evocative and associative cues and presented a broader range of discursive pathways. Some succeeded better than others in constructing convincingly variable stories, but all made carefully considered ventures in that direction.

Because this was the first time these students had encountered interactive fiction either as readers or writers, one might suspect that much of their fascination with the form owed simply to novelty. It might also be argued that students would not so readily have taken up authorship had interactive fiction been an established genre with a weight of tradition—materialized in some bricklike anthology—to exert against newcomers. The appeal of interactive fiction, especially for students outside the English major, may have come in some measure from its status as a novel and potentially subversive experiment, an activity not yet sanctioned by official literary culture.

These reservations may have much behind them, but we do not think they account for all the energy and interest we observed in our students. Even if one assumes that interactive fiction is a novelty, that does not negate its significance for the future study of writing. By their own account, students were engaged by interactive fiction not simply because it was different but because it *made a difference* in the way they thought about narrative. The electronic texts helped demystify literary objects for these readers, enabling them to realize what Barthes (1974) called "the goal of literature as work," which is "to make the reader no longer a consumer, but a producer of the text" (p. 4). To put this in terms

of Gere's (1987) discussion of writing groups, the encounter with interactive fiction allowed individual genius (or creative initiative) to reenter the writing class. It invited students to dismantle the hierarchical distinction between text production—a valueless academic exercise—and those productions called *texts*, where the academy situates literary value.

Speculations and Implications

This transformation of writing about literature might have some value for those interested in innovative pedagogies and appropriate uses of writing technology. Interactive fiction seems to enrich students' experience of literature. It also seems to help integrate that experience with the practice of writing as a social activity. Both of these effects could stimulate teachers and students to rethink our understanding of literary and academic writing—or at least to reformulate the relationship between those two domains. But as part of this rethinking we will need to address a series of fundamental questions about new communications media and technologies.

From word processing to desktop publishing to hypertext, the general tendency of electronic technology has been to reduce practical restrictions on written discourse, widening the circle of literary exchange. These innovations have held profound implications for literary institutions. In the first critical appraisal of electronic fiction, Niesz and Holland (1984) warned that the "fluidity of medium and technology" assumed by interactive literature "implies an essay, fiction, poem, or play almost unimaginably different from what readers have grown to know, expect, and love these past three centuries" (p. 129).

The experience of readers and writers in English 165 suggests that this new form of writing is neither as unimaginable as Niesz and Holland anticipated nor quite so likely to alienate anyone's literary affections. Defining the "fictional contract" of conventional narrative, Price (1983) proposes that "[t]o read a novel is to discover the order latent in its materials rather than simply to impose one by a set of rules" (p. 4). Interactive fiction does seem to overturn this doctrine, providing the reader with a system of possibilities and letting her find what order she will, either as reader or writer. But if the old fictional contract has lapsed, a convention of some sort remains in effect: By nature, interactive fiction assumes a community of purpose between readers and writers. The precise character of that community has yet to be determined, leaving a number of important questions open. McLuhan and Fiore (1967) hold that "professionalism is environmental, amateurism

is anti-environmental" (p. 93). Because interactive literature is radically anti-environmental, does it follow that it will have no professional writers or readers? How would a society of literary amateurs constitute itself? Can forms of authority and hierarchy survive in a decentralized discourse community? How will the academic community, which after all depends upon the professionalization of literature, respond to anti-environmental pressures? To put the question most bluntly, do hypertext and interactive fiction have anything to contribute to our present academic and literary culture?

Without prejudging these open questions, and with the stipulation that our own experience is very limited, we suggest that interactive fiction does have potential value for those who would teach writing through literature, or literature through writing. At the very least, an encounter with interactive fiction can provide a useful pedagogical experiment. Through such experiments we may engage transformations of reading and writing which we have always been able to imagine, but which new technologies now permit us to enact as well.

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