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Literary Criticism Since 1800
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Hills Like Plot Elements:
A Structural and Stylometric Study of a Hemingway Story

(With an Introduction on the Metacritical Concept of a Science of Literatics
and a Critical Theory of Reconstruction)

[Introduction]

[I. The Need for a Science of Literatics]

In his "Theory of the Formal Method," Eichenbaum declares Formalism's characteristic element to be the "endeavor to create an autonomous discipline of literary studies based on the specific properties of literary material" (in Todorov 25). Todorov summarizes this statement by asserting that "Formalism is characterized not by a theory but by an object. . . . A critical school is characterized. . . by the way it constructs the objects of its studies" (25). This object-centeredness is the essential postulate of formal/structural criticism and is the only way by which we may legitimately proceed with what might be called "Literatics"—the formal, empirical, methodical science of literature.

An analogy might serve to reaffirm this statement.

Let us suppose that we have decided to take up bird watching—better still that we are ornithologists observing the behavior of birds. We are out on a scientific excursion when we suddenly see the bright plumage of a male blue jay in a tree not far away. Clearly, we might observe the surrounding environment that includes and subsumes the jay, upon which the jay is both integral and dependent: the tree in which it is perched, the gently rolling, wooded countryside, the murmur of a brook flowing nearby. We might also reflect on the effect the

sighting of the jay has upon us: excitement, curiosity, the emotional and rational reverberations within us set to motion by the impossibly intricate complex of elements comprised of our respective life experiences, acquired bases of knowledge, received and developed ideologies. We might have a momentary and poignant aesthetic response to both scene and subject. More in keeping with our discipline, we might be mindful of the stereotypical habits of jays and their niche in the Linnaean scheme of classification, seeing this bird rather as species than as specimen. But the primary object of our study and the thing that ought to occupy our chiefest attention should be the bird itself. We ought to scrutinize the bird, submit it to the most intense observation of which we are capable as scientists, precisely noting its form, its song, its actions—all of its many characteristics. All else is—if not irrelevant—at least tangential to the close examination of our primary object and to the fulfillment of our purpose.

So too ought a work of literature be for the critic practicing and developing, theorizing and widening the science we might call "Literatics." The anecdote / tale / short story by Twain, for example, often referred to as "Jim Baker's Blue Jay Yarn" [*A Tramp Abroad,* 1880] is most properly looked at as an artifact of the art of language, the thing itself giving us the best and most conclusive evidence about itself. From this point (and many others like it), we may logically proceed inductively to a greater, general perspective, seeing Twain's tale as a specimen of the kingdom Literature, phylum Brief Narrative, class Prose, order Polished Oral Tale, family Mark Twain's Sketches Based Upon Oral Narrative, genus The Jim Baker Stories, specimen "Jim Baker's Blue Jay Yarn." Only after this is done ought we to — and necessarily through a more diffuse and darker glass are we able to — conjecture on the specimen's place in the ecological or natural scheme of things, what it indicates about the subjective god of its world, Twain[1] who created it (or about such similar beings [perhaps thence about some more objective "Truth" or deity]), or what our reaction to the experience of it tells us about ourselves.

Commenting upon Northrop Frye's critical perspective, Tzvetan Todorov discusses Frye's apparent metacritical stance:

> Frye's first response to the question, "What is criticism supposed to do?" can be
>
> summarized in few words: *it is supposed to become a science*. . . . Since critics readily agree

that the object of literary studies is a better knowledge of the literary works studied, it

follows that a critical work must not be written as if it were a poem, that a critic ought to

try to make his concepts unequivocal and his premises explicit, that he should practice

hypothesis-making and result checking. (90, my emphasis)

He further notes that Frye's complaint with the critical theory and practice of his day was that it

was "external" neglecting "the specificity of literature" (91).

At least three related problems are symptomatic of the sort of unscientific, subjective and

external approach, prevalent in the "post-Modern," "post-Structuralist" criticism of today:

1) the lack of a research framework, methodology, and system of investigation either

adapted to (or designed for) literary study or adopted (or invented) by students of

literature;

2) the lack of a common descriptive nomenclature for specific literary phenomena for

use in critical examination; and

3) the lack of a notation system that adequately transcribes the various characteristic

aspects and essences of literature (certainly the case in narrative fiction and drama, even if

poetics and prosody have highly developed systems).

Where rhetoric and poetics have, to an extent, achieved these things, the study of narrative

and dramatic art is only lately awakening to such possibilities.

One thesis of the present discussion is that we ought to get on with this task of completing

the "scientification of the study of literature—the study of Literatics. Corollary to this, we need

a framework for investigation, an *agreed upon nomenclature for the discipline* of Literatics, *a*

comprehensive taxonomy of genres for the advancement of a scientific investigation of the arts

generally and of literary art specifically, and *a system of notation and transcription* of critical

observations that is simple enough to be almost intuitively learned, yet comprehensive enough to

be of scientific value. Yet another corollary point would be the continued exploration of the

advantages of the computer as both an analytic and an inventive tool for the study of literary

texts.[2]

One discipline from which we might gain considerable insight is the already scientifically

elaborated area of Folklore/Mythology. Indeed, it is with the methodology and attitudes of the mythologist or folklorist that we can most profitably begin a search for the essential "the laws of literature." Great and pioneering works such as Aanti Aarne's *Types of the Folktale* and Stith Thompson's *Motif Index to Folk Literature* ought rightly to inspire the student of literary art as well. What works for "illiterature" ought to work for literature, for the essential difference between the two is the medium of transmission—both are variants of that mode of expression and creation which is the art of language. Mythological and folkloric investigations such as those of Vladimir Propp (*The Morphology of the Folktale, Theory and History of Folklore*), Lord Raglan (*The Hero*), and Joseph Campbell (*Hero With 1000 Faces, The Masks of God*) have already had impact upon literary theory. Already well-established and generally (seriously if not well)-received are the more scientific studies by such investigators as Northrop Frye, Wayne Booth, Girard Genette, Tzvetan Todorov, and others. We may also borrow freely from the other sciences for our investigation—especially biology, statistics and other forms of mathematical analysis, and logic. Genre study, for example, can benefit from biology's taxonomy of life forms. For example, the "phylogeny" of a genre might be traced. Statistical analysis can be brought to bear upon various aspects of literature including auctorial style, proto-narrative elements, the rhetoric and figures of fiction, and even pragmatics, aesthetics, and hermeneutics. Logic can help us validate or invalidate critical premises.

In part prior to—but largely in the process of—this investigation, a proposed nomenclature and methodology for the scientific, computer-assisted study of literature would be evolved. This endeavor would, of necessity, move into the area of "metacriticism" and toward the development of a comprehensive "theory of theories." One product of the scientification of literary criticism is the realization that most of our disparate critical stances are but different "specializations" or "slants" on a subject which has had few "generalists." Just as the ornithologist studies birds and the entomologist studies bugs while both remain biologists—"students of life," so the proper way to view an advocate of Reader Response, a New Critic, a Biographical Critic, a Social Critic, and an "Agenda" [ax to grind] Critic is not as adversaries with mutually exclusive doctrines of criticism, but as critics "specializing" in different *avenues of approach* to the study of the living

word (ideas remaining viable through time and across distance via the miracle of that recorded language or frozen speech that we call "writing" in general and "literature" in the artistic particular). Hence, our various critical positions may be subsumed as scientific specialties under this general discipline of Literatics. Certain clear areas of special interest emerge naturally from what might be called the "traditional" method of analytic criticism. In the study to follow, a particular work, Ernest Hemingway's "Hills Like White Elephants," will be examined from several specialized critical perspectives—each of them a branch of the overall scientific practice of Literatics. By way of exemplifying some of the possible methods and practices of such a science of literature, I will list the following approaches (most of them neologisms, some, perhaps, innovative):

> 1) *narratics*—the study of narrative construction in general, including:
>
>> A) *dialogics*—the specialized study of the presentation of human speech in narrative,
>>
>> B) *personaeics*—the specialized study of the presentation and development of characters in narrative,
>>
>> C) *descriptics*—the specialized study of the presentation of setting and the physical characteristics of characters,
>>
>> D) *perspectics*—the specialized study of narrative point of view and its various modes;
>
> 2) *hermeneutics*—the science of interpretation of literarure, including:
>
>> A) *symbolics*—the specialized study of the use of symbols to convey theme or meaning,
>>
>> B) *thematics*—the specialized study of explicit and implicit meanings derived from textual and semantic analyses;
>
> 3) *generics*—the study of literary types and genres, the taxonomical classification of such types, and of the transformations and metamorphoses such types undergo;
>
> 4) *pragmatics*—the study of the effects of literature upon receivers, in this case "narratees" (Prince 314);

5) *aesthetics*—the study of the underlying principles of quality and the critical means of evaluation and appreciation of works of literature and the application of such evaluative/appreciative criteria to individual works; and

6) *stylistics*—the study of the grammatical/poetical/rhetorical ways with words of the authors of literary works.

Another scientific principle which will be illustrated below in the discussion of the Hemingway story is the concept of what I will call "atomization" of the text—the breaking up of a literary text into sententia, lexia, and even single words for the purpose of essential analysis. This has, to a degree, been done in folklore through the conceptualization of and research on both motifs (the Finnish school, Annti Aarne, Thompson, et. al.) and functions (Propp). It goes beyond, I believe, the concept of "close reading" (New Criticism) and to the extent of "deep" reading of the text. It is the fundamental technique of the critical theory of Reconstruction outlined below.

[II. Reconstruction Theory]

Where the object of traditional criticism has been primarily the artifact, secondarily the artificer, and subsequently and only recently the "artificee," we, nonetheless, need to direct some of our scientific investigation to the examination and direct questioning of both writers and readers. It is curious that we have not done more of this already. If biologists could ask the beaver why it builds its dam or what it feels like to be a beaver they would do so. If botanists could inquire (in human verbal language) of the rose, "Where did you get that red?" they would do so. Essayists frequently inquire about, state, or speculate on the effects of nature and of art upon us. Why then should we not inquire many things of writers and readers, nay, even gather statistical research on the responses to those inquiries?

With software such as Fontographer™ (a typeface, graphic-logo creation utility for the Macintosh), symbols and notation systems for use in a developed shorthand for literary analysis and textual notation can be created and used in publication-quality, laser-printed documents.

The value of such a notation system would be seen in conjunction with the development of what the present writer calls a "Reconstruction" approach to literary study—something that would fit into the broader scheme of "Literatics" as one of many specialized avenues of appreciation and interpretation. Briefly, reconstruction criticism might be described as a blend of Traditional Criticism, New Historicism, Reader Response, and New Critical "close reading" (at the same time denying flatly both "intentional" and "affective" fallacies). The essence of the theory is simple in concept, more difficult to achieve in practice. The closer the practitioner comes to fully accomplishing all steps in the method, the better the interpretation or insight ought to be.

First, the practitioner attempts a self-imbuation in the milieu of the author, ideally having as broad a background in both critical theory and in the craft of creative writing as possible. This would *optimally* include reading all of the works of the author in question, all previously published criticism on the author, all biographical and autobiographical works on the author, all available letters, speeches, interview comments, etc. by the author, and gaining as thorough a knowledge as possible of the history and culture of the author's life. Approaches bordering on the mystical such as traveling—even if only via art, photos, or movies—to places of the author's life, or dressing in the manner of the author or the author's day might be considered valid to the extent that role-playing (detailed in step three below) is the core activity of the method.

Second, the text to be considered is ideally converted into digital format so that the individual sentences (even phrases, clauses, or lexia) can be separated into units for study. This rearrangement of the text would then be printed out as hard copy (or left as electronic screen text) with enough space between separate sentences that notations can be made above the lines—in much the same manner that scanning or rhyme scheme notation is done in prosodic study.

Third, the critic does a "deep" and methodical reading of the text with the important distinction that the reader assumes the role of the author during this reading, impersonating (in the best sense) the author of the text in the act of either writing or revising creatively.   Hence, the critic is "reconstructing" the text during this reading, asking questions such as "Why did I write that?" or "What did I hope to achieve by that?" or "What effect will this have upon my readers?" or "Does this get my message (which is . . .) across?" As the reader-author-critic answers these

questions, the system of notation is used to record those answers on a sentence-by-sentence basis with notations above each sentence of the text. Just as each word choice; each phrase; each narrative stance or shift; each use or non-use of dialogue, attribution, description, symbol, etc. is important to the author, so the reader-author notes its importance. In this manner, at least theoretically, all of the subtle nuances of theories of literary criticism could be noted—even theories seemingly opposed to this reconstructive model [New Criticism, for example].

Fourth and finally, these notations could be put back into digital form (or left in that form for those who feel comfortable leaving the atomized text in digital form to begin with, thus being able to make notations directly above the text on the computer screen). At this point, many kinds of computer searches and statistical operations could be used for analysis of data.

Step one might easily be less intensive for those already well-versed in the study of literature. Step two is an advantage to the scientific approach but need not be done for a reader to attempt this kind of reading—the text in the book will suffice. In the third step, use of the brief note to oneself above the lines or as marginalia, instead of the more scientific notation system, ought still to be valid in achieving some insight. The method would also lend itself to reader response theory and even pedagogical applications. One could have many readers so read and annotate the text— then compare and contrast and statistically examine the various readings.

Such a theory of Reconstruction offers new avenues of insight to broaden the scope of literary criticism. Beyond this, it is in keeping with the notion of a science of literature— Literatics—and would lend itself usefully to many of the special areas of such a discipline.

[**"Hills Like White Elephants": A Critical Examination**]

Ernest Hemingway's "Hills Like White Elephants" is one of the more famous and often anthologized of what we might call his "micro-stories." It's brevity gives it a virtue as an object of literary criticism for reasons in keeping with Poe's celebrated critical judgement in his discussion of Hawthorne's tales, preferring the short story to the novel—a unified and essentially complete

whole of critical comment may be constructed based on a deep reading of every facet and fragment of the literary work. First published in *Men Without Women* (1927), the story is a fine example of both Hemingway's distinctive style and of modern literary Realism. It's *surface* topics—the issue of abortion, the double standard, exploitation, and decadence—have remained topical. The following study is a demonstration of a critical method or methods which can generally be included under the aegis of a proposed science of Literatics.

Some of the especially noteworthy aspects of the story are worth mentioning in a brief preview.

First, the story can be seen as an example of the growing emphasis on dialogue over narration, of scene over summary, of mimesis over diegesis in the fiction of the early twentieth-century modernists. Hemingway's various ways of presenting dialogue will be scrutinized.

Second, conceding that the story's first purpose is likely to be simply the portrayal of a realistic and believably human "slice of life" episode, the story is highly symbolic with many aspects of the setting offering insight into both the author himself and his deeper purposes of theme and comment on the human condition.

Third, while the story seems perhaps at first to be greatly divergent from the "traditional" story (for example, offering no real "closure" or making use of a relatively objective third-person narrative voice), it is really a classically structured narrative combining ancient and traditional elements of essential story and storytelling technique, interesting in the orchestration of its motifs and subtle nuances of plotting technique.

To facilitate a deep analysis of the text, a computer program custom designed for the "atomization" of text and the attributive marking or flagging of characteristics for statistical analysis has been used. This program, which I call "Stylometer©" is a Hypercard® stack designed for the Apple Macintosh and programmed in a fairly basic computer language called "Hypertalk®."[3] The program imports the digitized text file to be analyzed (this digitization is done with an optical character recognition program such as Caere's OmniPage®) and automatically breaks the text into sentences on separate "cards" (screens) for a sentence by sentence study. Such "cards" are illustrated on the following pages (Figures 1-4).

Figure 1: This is the "card" (screen) for sentence # 19 of "Hills Like White Elephants." It is the line of dialogue spoken by "the American" responding to "the girl" and her statement which gives the story its title: " 'They look like white elephants,' she said." The notation in the text field below the sentence field is part of an evolving shorthand for such analysis Λ=line of dialogue, **a3** = attributed terminally, $\Pi\ 1$=persona (character) # 1 in order as introduced in the text, $N\Delta$=narrative diegesis. The girl's answer: " 'No, you wouldn't have.' " [$\Lambda\ \alpha0 : \Pi\ 2\ /\ IM$] (line of dialogue, unattributed to character 2) is the <u>inciting moment</u> of the person vs. person conflict that is central to the plot.
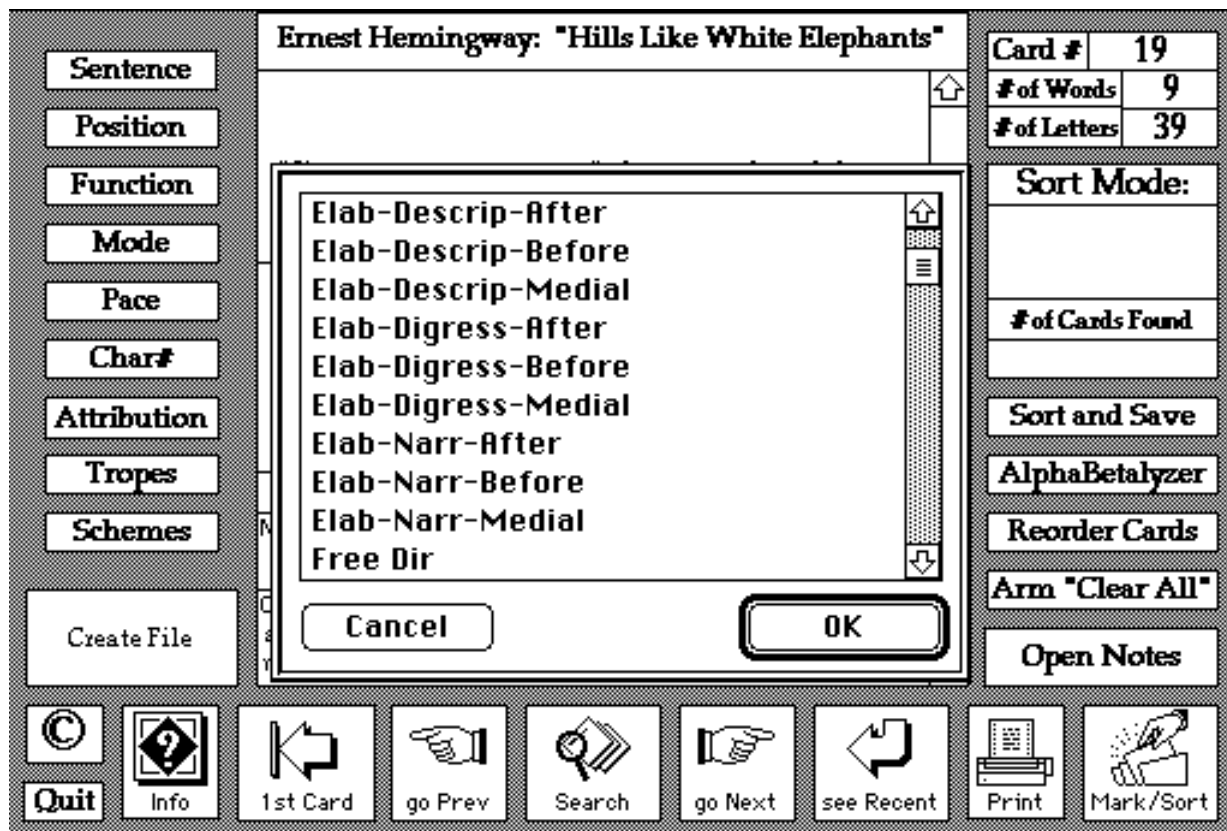
Figure 2: The "button" on the left marked "Attribution" has been "clicked," opening a field for the tagging of the sentence in Figure 1 for later statistical sorting. The sentence will be marked "Elab-Narr-After" which signifies that this sentence, the 19th of Hemingway's story, is a line of dialogue that has been "elaborated" or complicated with narration—mimesis blended with diegesis.

Figure 3: Sentence 29 is an unusual use of dialogue to complicate narrative diegesis. It illustrates Hemingway's experimentation and versatility with dialogic technique.

Figure 4: Sentence 146 is a typical, rolling Hemingway sentence of narration, involving the actions of both main characters and noting the aspect of the scenery/setting at which each is "looking." Importantly for the theme, she is seeing the hills and a more distant and evocative, imaginatively inspiring vista; he is looking at the table in the narrow and unimaginative perspective that show him to be the shallower character. This is an example of how such sentence-level scrutiny may afford new and interesting appreciations and observations.

One interesting thing about "Hills" is its mimetic "density." Only 36 sentences are narration and description, the two aspects of diegesis (Aristotle, *Poetics,* et. al.) which Genette distinguishes (*Figures* 133), whereas 148 sentences are mimetic presentations of characters' speech. Most of these lines are in the form of unattributed—as Seymour Chatman would say "untagged" (198-201)—dialogue. This use of unattributed (free) lines of dialogue, often in a sort of "tennis match" of back and forth without reference to the characters speaking was pioneered in American Literature by Stephen Crane [see especially "The Open Boat" where whole pages of unbroken free lines are spoken by—not two, but four!—characters]. Hemingway as an aspirer to literary realism uses it often, the purpose clearly being to remove as much as possible from the reader's consciousness of the story <u>as story</u> and to try to create an "invisible" medium—as close to really eavesdropping on the private conversation of two people as possible. When he tags his lines, Hemingway shows a clear preference for attribution following the quote. He never (in this story) uses initial attribution, nor does he use medial attribution in the true sense (interrupting a sentence of dialogue), his sentences of dialogue following a tag being all full sentences. Here we can began to gather evidence for a stylistic preference. One could—theoretically (and relatively easily by means of a computer)—examine <u>all</u> of Hemingway's fictional sentences presenting dialogue and analyze his stylistic tendencies in this (or any) aspect.

Moving to the study of what I have called "symbolics," similar card notations could be made, flagging the sentences as carriers of key symbols that broaden our interpretation of the story. At least five of these symbols are archetypal or natural, at least one depends on an intentionally (?) ambiguous mythical or religious allusion, and at least one is what I would call a "contrived" symbol, a "subjective correlative" created by Hemingway for this unique story [like Cranes cigars in "The Open Boat"].

Great pains are taken with the opening paragraph which many would call the "exposition" of the setting (Ebro River, Barcelona, Madrid) and the narrative introduction of characters ("The American" and "the girl") before conflict. The precise description is important, because it introduces the archetypal/natural symbols of Fertility and Life (the far, fertile, beautiful side, the imaginative, the "lost" side of the river); Barrenness, Sterility, and both Spiritual and Physical

Death (their present side of the river); the Journey or Road of Life (the river itself); Division and Disunity (the river as separator, as barrier); and Choice (the station, from which many paths and errands meet and scatter and decisions on "Which way?" have to be made); and, finally, Transition and Change (the doorway).

One of the most interesting symbols—something we might call an "interjective correlative" interjecting itself as a received symbol from both Greek myth and Christian (Catholic) practice— is demanded by the frequent reference to and prominence in the story of "the bead curtain" with its purported mission "to keep out flies" and its actual function as symbol: "The girl looked at the bead curtain, put her hand out and took hold of two of the strings of beads." As a symbolic allusion to the Greek myth of The Fates—Clotho, the Spinner of the thread of life; Lachesis, the Measurer of the thread; and Atropos, the Cutter—the strands represent the separated strands of their two lives or the two alternate lives that lie before her (depending on her decision). As a Christian and Catholic symbol of the beaded string of the rosary, the curtain strands serve as a reference to the violation of both church doctrine and the laws of Spain that the two are contemplating. With this we must note that the strands here are symbolic of the circle of the infinite rosary of beads broken and disjoined from grace, symbolic of material decadence and sensual excess (typical Hemingway themes). We may also look at the strands as reminders that our lives are "strung" episode by episode, event by event, decision by decision as the beads on a string or as the events in a plot. Taken as a whole, the beaded strings make a Curtain that is neither transparent nor opaque. They cover a Doorway through which the girl can only glimpse and conjecture about the other side, they represent an imperfect—but likely somewhat accurate— view of the future.

The design painted onto [how is unclear] the beaded curtain says "Anis del Toro." One conjecture we might make about this element of the story—since one of our premises will be that the elements of a story ought to be relevant and necessary to the total work—is that the bull is symbolic on a linquistic level in that the man is "bull-headed" in his obstinacy and (pardon the pun) one-track mindedness. Another similar interpretation might be that she sees his lines as "bull"—with full awareness of Hemingway's probable pun on *anis/anus* .

Turning to some structural comments on the story, one of the more interesting is the alternation of long stretches of mimetic dialogue (as mentioned before, mostly unattributed to approximate most closely the flow of "real" speech) and short passages of Hemingway's trademark narrative sentences, paratactic (coordinating rather than subordinating) in what Richard Lanham has called "perhaps the most consistent, philosophically reasoned paratactic style in our time" (33), often seemingly inclusive of trivial detail (that usually is later seen to be important). Another interesting technique is the shift from Spanish (which the girl clearly cannot understand) between the American and the waitress after his first order of "Dos cervezas." How far this predates the cinemas use of this technique—foreigners talking in their own language with subtitles shifting in mid-conversation to English (or whatever, as appropriate) would be an interesting study. While lacking an explicit ending and seeming to be a "Lady-or-the-Tiger" type of story, the tale moves quite chronologically except for three brief examples of what Genette would term "external analepses" (*Discourse* 49)—references to events entirely external to the extent of our primary narrative at the train station. One of these is a reference by the man to acquaintances of theirs who have had "the operation." Another is embedded in one of the girl's (Jig's) lines implying that their lives have reduced to monotonously iterative (*Discourse* 117-55) sensual pleasure: "That's all we do, isn't it—look at things and try new drinks?" The third, and most significant one, is a simple look at their bags against the wall of the station which have "labels on them from all the hotels where they had spent nights." This last analepsis is almost the only example of what Genette would call "summary" where narrative time [NT] is less than story time [ST]. Nearly all of the story proceeds at that narrative pace that Genette would term "scene" [NT = ST] (95). It would be quite easy to turn this story into a one-scene play, a mini-drama. There is one curious incidence—either an error on Hemingway's part, or an intentional experiment—with an absolutely abrupt ellipsis (Genette 96) [NT = 0, ST = n]:

> "You want them with water?" asked the woman.
>
> "Yes, with water."
>
> "It tastes like licorice," the girl said and put the glass down.

Clearly, some time must have elapsed between the ordering of the drinks and the girl's

tasting of hers, but here—without even an "A few moments later the waitress returned with two glasses" [and certainly without a "She looked at the two glasses and then at the man and then at the girl and then she set the two glasses on the table and looked at the table and at the legs of the table and then at the man and the girl together and then she went back inside."—sorry, but critical parody *(parodics?)* too might be a legitimate avenue of approach]. But here we have an ellipsis so abrupt that it will seem to many readers that <u>something</u> ought to be there. Otherwise— and perhaps intentionally on Hemingway's part, remembering again that the cinematic metaphor was a possibility in 1927—we have the literary equivalent of a "cut" in cinematography.

Aesthetically, we may evaluate and appreciate "Hills Like White Elephants" as a fine example of both its general type as a modern realistic micro-story, genus Hemingway, and as a good window on the admirably clean and distinctive style of one of America's most influential writer's. It is a tightly wrought whole of recognizable and classifiable parts and transitions. Perhaps it is Hemingway's "Mona Lisa"—leaving us wondering at the end why the girl is smiling.

These are only a few examples of the possible specializations of critical enquiry opened by the scientific method of literary investigation. Another might be to apply Vladimir Propp's morphology or his "Theory of Transformations of the Wondertale" (82-99)—including such concepts as *Reduction, Expansion, Contamination, Inversion, Intensification, and Substitution* which might all be applicable to literary material to a greater or lesser degree and certainly applicable to the evolution of literary genres. Perhaps an attempt could be undertaken toward an extension of Wayne Booth's *Rhetoric of Fiction* to include actual "figures of fiction"—tropes of narrative art, or linguistic or grammatical analyses of style.

We as critics of literature have lacked a common purpose, a common nomenclature, a common method, and even a common object in critical theory and practice. We as devotees of the arts and humanities have generally been resistant to the rigors of science and the advent of the computer—even being slow to embrace the word processor. We must remedy this by making our discipline more disciplined, by seeking for those rules, principles, and practices which govern the art of literature, perhaps acknowledging with Tolkien that "we make still be the laws in which we're made" (74).

Notes

1 See J.R.R. Tolkien's important essay "On Fairy-Stories" for a discussion of the concept of authorship as an act of "Sub-Creation." Tolkien sees human creative activity as the "primary" creative impulse (that of God) refracted "from a single White / to many hues and endlessly combined / in living shapes that move from mind to mind" (74).

2 Computer technology is a largely neglected aid to literary criticism at the present writing. While the use of the computer word processor is obvious and while statistical studies of linguistics, vocabulary, and grammar have been and are being made (computers that compose poetry like Byron's or that attempt to discern the genuineness of a "new" Shakespeare poem, for example). But these are only the crude beginnings of insight into the potential uses of computers in literary scholarship. One quick example of a largely unexplored computer word processing tool is the "Find" function of most word processors. Combined with the new OCR (optical character recognition) software that allows for large quantities (even book length texts) to be quickly turned into text files, the "Find" function can quickly and easily explore texts for key words (for example, the number, speaker, context, and occasions of use of the word "creature" in Shelley's *Frankenstein*), for stock phrases ("wine-dark sea" in the *Odyssey*), for use and frequency of attributed dialogue ("he said," "she exclaimed"), etc. Each day, more and more works of literature are being converted to digital format and put on computer disk or CD ROM. Titles like *The Complete Shakespeare* and *The Complete Sherlock Holmes* are already available (on single! compact disk).

Programs such as Hypercard™ or Storyspace™ for the Apple Macintosh or ToolBook™ for the IBM PC (and clones) offer object-oriented programming and linking (digital cross-referencing) of text in hypertextual, user-interactive, relational databases. These programs are capable of multimedia creation and make use of relatively easy-to-learn programming languages. The present writer has, for example, scripted a Hypercard™ "stack" that divides imported text into separated sentences for sentence level (sentence by sentence) revision (or analysis). "Hyperfiction" is already being published on disk. Multimedia presentation of narrative and "cyberspace" simulations are now being developed where the equivalent of the reader—the

hyperfiction, multimedia, cyberspace "explorer"—takes an active and interactive role in the story itself. Ought we not take advantage of these same capabilities in organizing and hyper-cross-referencing our ideas in organic, living, and growing bodies of hypertextual and multimedia criticism?

Consider the advantages of a computer database on any given text (or author, or genre, etc.) that includes not only *the text to be studied* (it could even be a variorum of the text), but also offers instant access to:

> 1) all previous critical scholarship concerning the text;
>
> 2) parodies of the text;
>
> 3) motion pictures derived from the text;
>
> 4) biographical (and autobiographical) data (even book-length texts, photos, and film) on the author of the text;
>
> 5) historical, sociological, economic, and cultural data (again multimedia) on the milieu of the author of the text;
>
> 6) documented responses of readers of the text; and
>
> 7) even "writing spaces" into which explorers of the data can offer new comments and ideas.

Such a database is possible now! The database described would likely fit on a single CD ROM disk or certainly on a laser video disk. In the broader concept of Ted Nelson's ideal of "Hypertext" it could ultimately be accessible as one "node" or interstice of many in a great interconnected body or "web" of information.

[3] Apple's Hypercard® is one of the many programs available today that enable sophisticated programs to be designed in OOP (object oriented programming), "user friendly" by technologically unsophisticated programmers.

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