

## EMPLOTTING THE READER: MOTIVATION AND TECHNICAL DOCUMENTATION

DAVID GOODWIN  
*University of Waterloo, Ontario*

### ABSTRACT

Technical documents implicitly require readers to play out textually constructed roles in order to create meanings. Good technical writers create texts that motivate their readers by emplotting them in an attractive fabula, and, especially, in a role that not only achieves the ostensible purposes of the documentation but also allows the reader to function as the hero in a narrative of progress and improvement. Drawing on reader-response criticism and narratology, this article shows how a particular instructional software manual, the *VP-Expert*<sup>™</sup> guide, instructs and motivates readers by using devices which resemble the conventions of heroic narrative.

Killingsworth, Gilbertson, and Chew have argued recently that "just as rhetoric in all its types aims to 'move' the reader, all technical writing is action-oriented" (1, p. 16). Applied to instructional, tutorial-based software manuals, this statement proves to be true in two senses. Explicitly, an instructional manual attempts to move the reader, step by step, through a sequence of actions to a desired outcome. Word-processing software manuals, for instance, lead the reader through the creation, storage, printing, and design of documents; spreadsheet software manuals, through the steps leading to the production of visually displayed columns, tables, charts, and so on. Implicitly, however, a manual must accomplish a great deal more. It must encourage the reader to face the daunting spectre of neologisms, foreign terms, and abstract, technical concepts, and to continue to read the text in spite of these obstacles. To accomplish this goal, a manual must *employ* the reader, that is, must *create an action-oriented role within a storyline that transforms the reader from a hesitant, if not reluctant neophyte, into a*

competent software user (and perhaps, of more immediate benefit to the software company, into a satisfied customer).

Audience motivation, then, plays a vital role in effective technical communication. Specifically, a good technical writer must keep a reader reading long enough and carefully enough to become competent at specific tasks. The art of generating and sustaining the reader's motivation, however, is not adequately explained by current writing theories nor always practiced with success by technical writers. Indeed, most technical writing experts provide advice only about the explicit level of action: how to explain tasks and processes to a readership. They give little or no advice about this other, motivational level. Yet without the implicit action of emplotment, manuals may inhibit—or worse, completely undermine—the reader's interest in, or ability to use, a software product.

My goal in this article is to develop a theoretical model to explain, and a practical set of principles to guide, the structures of motivation that help the reader to read technical documentation. To outline the nature of audience motivation, this article will survey some well-accepted distinctions in reader-response criticism, starting with the relationships among actual, authorial, and ideal readers. To study how technical writers effectively emplot—and by emplotting, motivate—their readership, this article turns to narratology and examines the different storylines implicit in the task outlines and sequencing of a particular software manual, the *Vp-Expert*™ guide. Finally, it looks at how various parts of the *Vp-Expert*™ manual adopt strategies reminiscent of heroic narratives—and in particular, late point-of-attack time sequencing and *ekphrasis*, a classical figure of summation—to ensure the reader's identification with the methods and objectives of the technical writer.

### THE TECHNICAL WRITING AUDIENCE

Much reader-response criticism points to an important conceptual dichotomy in current theories about audiences, namely, the distinction between actual (real) and authorial (implied) readers.

#### Actual, Authorial, and Ideal Readers

Actual or real readers are usually defined as those flesh-and-blood individuals who buy, open, and read any printed materials. First and foremost, then, the actual reader is a concrete reality. He or she has specific habits, preferences, knowledge, and beliefs. These specificities, moreover, translate into a distinct set of abilities and frameworks which each reader uses to create textual meaning. As Peter J. Rabinowitz explains, specificity is the defining feature of real audiences: "each member of the actual audience is different, and each reads in his or her own way, with a distance from other readers depending upon such variables as class, gender, race, personality, training, culture, and historical situation" [2, pp. 20-21].

Conversely, the authorial or implied reader is not a living person existing outside the text but a hypothetical, abstract, and generalized being postulated by, and existing solely within, the text. The authorial audience is invented by the writer, embedded in the text, and, to a significant extent, imposed on the actual audience. Walker Gibson's "mock reader" [3], Wayne Booth's "implied reader" [4, p. 8], Arthur Sherbo's "inside reader" [5, p. 36], John Preston's "created reader" [6, p. 2], Walter Ong's "fictitious reader" [7], Gerald Prince's "virtual reader" [8], and Peter Rabinowitz's "authorial reader" [9, p. 126] all postulate fictitious readerships whose function is to shape the responses of the actual readership. As writers, we shape the actual audience's responses by inviting them to recall what the authorial reader is expected to know, to accept what the authorial reader is expected to believe, to become what the authorial reader is expected to become, and thus to read our writing in a manner appropriate and consistent with its genre and purposes. Anyone who refuses to pretend to believe in fairy godmothers, for instance, fails to become the authorial audience of a fairy tale and will probably misinterpret the conventions of the genre. Such a reader may come to the conclusion, for instance, that Cinderella is "a psychotic young woman subject to hallucinations" [9, p. 129].

Generally, a writer attempts to create roles for the readers which will, in turn, elicit their positive responses. Literary texts are free to violate this general rule, as novels sometimes do when they ask their audiences to assume an unflattering or alien role in order to highlight a theme or message. But most non-literary writing, and certainly all technical documentation, will not risk the goodwill of real readers, even temporarily. Instead, these forms of writing strive to create authorial roles that are immediately appropriate, interesting, challenging, pertinent, and so on. Strive, however, does not mean achieve: failures to create the right authorial reader may outnumber successes. But it does imply that the union of the authorial with the real audience—and, in particular, a union that promotes a good reception of the text—should be paramount in the mind of the technical writer.

The authorial audience almost always shades off into an ideal one. Under these conditions, the implied reader is the one that completely accepts the author's stance, comprehends the author's code, and strives to achieve the author's goals. Booth underscores this point when he equates the "implied reader" with an "ideal interpreter": an audience which cooperates with the writer by adopting author-inscribed roles without any modification or resistance [4, p. 8]. Similarly, Prince defines the "ideal reader" as someone who would "understand perfectly and would approve entirely the least of [the writer's] words, the most subtle of his intentions" [8, p. 179]. The ideal technical audience, then, would always understand the intentions, as well as carry out the instructions, of the technical writer without fault or misapprehension.

Actual readers, however, frequently resist authorial roles, very often because they resent, disagree with, or feel confused by the ideals inherent in those roles.

Thus if the authorial-readership role is demeaning, inappropriate, ill-defined, or in some other way alienating to the actual readership, a schism develops between the aims of the writer and the actions of the reader. "We resist the blandishments of the copywriter," says Gibson, "just in so far as we refuse to become the mock reader his language invites us to become" [3, p. 266]. This resistance can originate from a number of sources: from the writer's violation of the actual reader's sense of the credible, for instance, or from a violation of any commonly accepted truism about writing style, content, organization, or document design. To find an example of the first case—violating credibility—we need only look to late-night television commercials. Do we really believe we can julienne-cut a large pile of fries in seconds? Do we want to be a member of this implied audience? Examples of the second case—violating stylistic and genre conventions—abound in any computer manual which presents material in a visually unappealing way, relies heavily on the passive voice, and puts cause-and-effect sequences in the wrong order. In this situation, we are asked to play an equally unattractive role: namely, the passive processor of information, the mere attendant to the writer's purposes, servile even to the point of untangling vague pronoun referents and awkward sentence structures merely because it is expected of us.

### Excluded and Enforced Readers

Pushed hard enough, audience resistance gives way to hostility: the reader closes the manual, despises the writer, forgets the product. Hostile readers become likely candidates for one of two other audience roles: the excluded or the enforced reader. Marie Maclean defines excluded readers as those "highly ambiguous spectators who, either by reason of such authorial prohibition as 'This book, this performance is intended for men/women alone' or by reason of social convention or legislation, *should* not be present or are discouraged from being present, at the performance, just as they are discouraged from reading the text" [10, p. 38]. Examples of excluded audiences might consist of females at a female strip show or female readers of a document that uses sexist language. She defines enforced readers, by contrast, as those who "have to hear the performance [or read the book] . . . whether they like it or not" [10, p. 38]. This audience, in turn, might consist of students who must read and write about Shakespeare, or employees who must read and respond to the memos written by superiors within an organization.

Unlike strip shows and Shakespeare, software manuals don't usually generate completely excluded or enforced readerships. They do, however, create roles along a spectrum marked, at either extreme, by exclusion and enforcement. At the one end, we find manuals that use highly technical language without providing glossaries of terms, or that introduce abstruse concepts without grounding them in examples familiar to the real readership. Such manuals address an elite audience and exclude all others who have not been—nor, while reading these manuals, will

be—initiated into the language and concepts required to understand the documentation. At the other end, we have manuals written for software users within organizations, users who are forced to learn software applications in order to keep their jobs or advance in their positions.

The worst situation is to be both an excluded and enforced reader: someone who must learn software from a manual that provides little or no instructional support. Instead of invitees, such readers become exiles, marooned in a text without any means adequate to address their needs or pursue their ambitions. As Maclean points out, "the betrayal by enforcement . . . which forcibly couples reader and texts, stands to free reading as rape stands to love" [10, p. 40]. Little wonder, then, that technical writers who pay insufficient attention to the authorial roles they create can easily lapse from invitation to violation with devastating effect on the actual reader.

### THE WRITER'S EMPLOTMENT OF THE READER

Clearly, technical writers need to understand the nature and implications of the roles they embed in their documentation. By using this knowledge, they can avoid creating authorial audiences that alienate or exclude—and promote ones that attract and motivate—the actual readership. Specifically, they should be familiar with the basic unit in narratology—the fabula, or basic story structure—because readership roles, as I hope to show, always function within a storyline.

### The Structure of Fabulas: Events, Actors, and Outcomes

Fabulas consist of three basic components: events (actions), actants or actors (those who act or are acted upon), and outcomes (the results of the acts) [11, pp. 11–13]. Put simply, a fabula traces the sequence of events in which someone (or something) attempts to produce some result or achieve some goal. Time and location, too, can be added to this list of features since all actions presuppose a period of time (duration) and an expanse of space in which to occur.

Narratologists define an *event* as an action involving a "transition from one state to another, caused or experienced by actors" [11, p. 13]. Often this event is a sequence of individual acts, many of which involve human choices and confrontations, and most of which operate within some pattern of recognizable relationship: the rain falls and then the ground gets wet; someone wins a lottery and then buys a yacht; and so on. In a software manual, the event may be the sequence of explanations, tasks, and examples that lead the reader from one state (desiring computer knowledge and skill) to another (acquiring that knowledge and skill). Correspondingly, an *actor* is defined as someone or something which undergoes transitions. A wide range of actors can function within any given fabula. For instance, there are senders (something or someone who initiates the change), receivers (who benefit from the action), helpers (who aid an actor to achieve a

goal), opponents (who block achievement), and so on. And finally, these actors and their actions, taken as a whole, contribute to a process which moves the storyline towards—though it may not achieve—an *outcome* or resolution (see Figure 1). Outcomes fall under two very general headings: processes of improvement (the actor succeeds) and processes of deterioration (the actor fails). Processes of improvement abound in tales about the fulfillment of a task, intervention of allies, elimination of the opponent, negotiations, and satisfactions. Processes of deterioration feature in stories about sacrifice, endured attack, punishment, missteps, and impossible obligations [11, pp. 22-23]. Clearly, most manuals seek to create roles that result in a positive outcome (the authorial reader fulfills a task) rather than in a negative one (the authorial reader suffers setbacks and missteps).

**Primary and Secondary Fabulas**

Two fabulas govern the writer-reader relationship: a primary fabula and, embedded within it, a secondary fabula. The primary fabula is not, properly speaking, a narrative within a text. Instead, it is a real-world situation, one enacted by flesh-and-blood agents—the actual reader and writer—who are free to

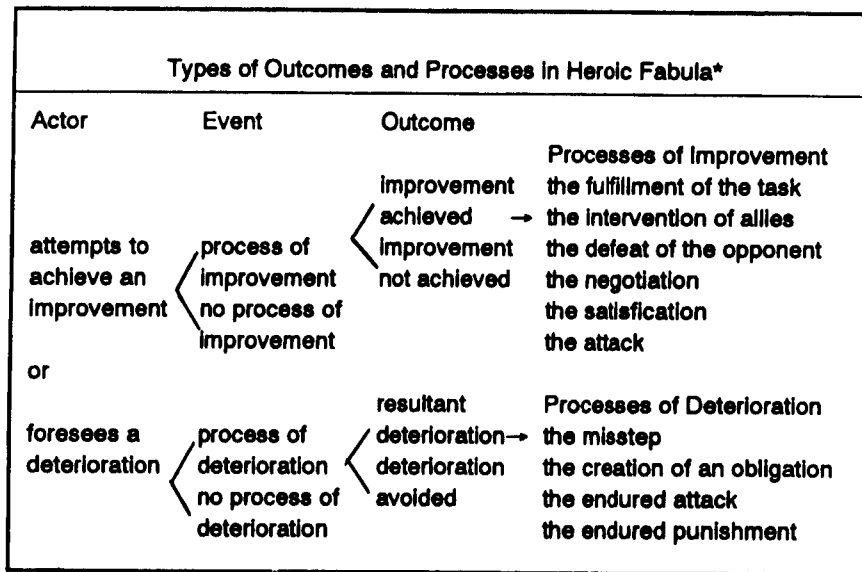


Figure 1. A description of the narratological structures emplotted in technical documentation. \*Adapted from Mieke Bal's *Narratology: Introduction to the Theory of Narrative* [11, pp. 22-23].

misjudge, disagree, and ignore each other. Such situations, though filled with contingencies not found in texts, nonetheless tend to follow patterns of action and expectation reminiscent of storylines. In the primary fabula, an actual reader (primary actor) generally attempts to read the writer's manual and become a member of the authorial audience (primary event) to achieve some purpose (primary outcome). In this story, the manual functions as an object, as a means to an end, which the user may or may not find useful.

Embedded in the primary event, however, is a secondary and textbound fabula: the story of an authorial reader (secondary actor) who successfully masters all instructions and explanations (secondary event) and thus achieves the skills and goals promised in the manual (secondary outcome). (See Figure 2.) Put simply, to perform the tasks set by the manual, actual readers must become actors in this second, textually embedded fabula of improvement and success. Here, the manual is not an object in, but the very world of, the fabula: everything that happens to the authorial reader is determined by the text. Not surprisingly, then, the actions of the authorial reader are ideal, that is, they always lead to useful, positive outcomes.

Primary and Secondary Readership Emplotments			
	Actor	Event	Outcome
First-order Fabula*	The actual reader	reads the writer's manual/becomes (or doesn't become) the authorial reader of the second-order narrative	and acquires (or doesn't acquire) new skills and knowledge
Second-order Fabula**	The authorial reader	understands and follows the sequence of instructions and tasks outlined in the manual	and acquires the skills and goals set by the writer
<p>*In the primary fabula, the manual is an object in a real-world event that may or may not serve the reader's purpose. That is, the reader can reject freely any readership role created by the writer.</p> <p>**In the second-order narrative, the text of the manual is the world in which all events take place. Notice that the outcome for the authorial reader is never contingent and always successful.</p>			

Figure 2. The relationship between the emplotment of actual and authorial readers in technical writing.

In instructional manual writing, the events and outcomes of the primary and secondary fabulas ideally should map on to each other, so that the real reader, by adopting the role of the authorial reader, becomes a knowledgeable, competent, and accomplished user of software. For instance, the relationships which govern events in the secondary fabula must correspond exactly with those in the primary fabula. Otherwise, pressing CONTROL-K will not give users the same result on their computer screens (primary fabula outcome) as it does in the manual (secondary fabula outcome). Similarly, the outcomes of the two levels of fabulas should overlap as much as possible. In the primary fabula, the process of improvement usually involves "the fulfillment of a task," namely, the real reader's successful accomplishing of tasks specified by the software. In the secondary fabula, each task in a manual—the steps required to format a disk, for instance—functions as a separate narrative episode, complete with its own helpers (an illustration or graphic), opponents (an example which applies only to hard drives while the actual reader's system has two floppy-disk drives) and, of course, outcomes (the user's success or failure to format the disk). Ideally, the sum of the authorial reader's successes will add up to a successful outcome for the actual user.

Ultimately, then, the writer succeeds when the actual reader fulfills the same tasks and achieves the same level of knowledge and skill that the authorial audience is emplotted to fulfill and achieve. A number of narratological nonequivalencies, however, can disrupt the ideal relationship between actual and authorial readers. Actual readers, for example, may have an external sender (an employer who requires computer competence) and an internal one (their own curiosity or ambition); may be direct receivers of the action (a pay increase or promotion) and an indirect one (intellectual pleasure); may find the manual—and embedded in it, the authorial reader—a helper or an opponent (see Figure 3). Authorial readers, on the other hand, may lack senders, only receive from an action what the writer has inscribed as ideal, and can always count on the aid of helpers (such as diagrams, tables of contents, examples, and so on) whatever that the writer has included in the manual. These nonequivalencies, if allowed to surface in the minds of actual readers, can interfere with their ability to identify with their counterparts in the secondary fabula.

### READER MOTIVATION AND THE HERO'S PROGRESS

Writers must be careful, therefore, to provide incentives for the real readership to overcome its points of difference—and emphasize its points of resemblance—with the other, textually bound audience. These incentives, or motivations, play a crucial role in the structure of any successfully written instructional manual.

#### Kinds of Actors in a Heroic Fabula and their Roles in Instructional Manuals

1. **The Hero:** the primary actor who undertakes some action and achieves a successful outcome. In an instructional manual, the Hero is the authorial reader (the reader constructed by the text).
2. **The Sender:** the actor who motivates the Hero to undertake an action. In an instructional manual, the Sender is the implied writer (the writer constructed by the text).
3. **The Receiver:** the actor who receives something from the Hero's actions; very often the Hero and Receiver are the same. In an instructional manual, the authorial reader is always successful and therefore always derives benefits from the events. If the manual is successful, the actual reader, the actual writer, and the software company may all receive benefits as well.
4. **The Helper:** the actor who provides knowledge, advice, and other aid to the Hero. In an instructional manual, the Helper might be, for instance, a graphic aid, a glossary of terms, or an example.
5. **The Opponent:** the actor who blocks or challenges the Hero in his or her progress. In an instructional manual, the Opponent can be any graphic or textual element that hinders the real reader's ability to master skills or acquire knowledge.
6. **The Power:** a generalized, abstract force which can help or block the Hero. In a technical manual, the Power might be language, the software company, or the manual taken as a whole.

Figure 3. A narratological division of the roles embedded within instructional manuals.

### The Unmotivated Reader: Operationalism

Many actual readers complain that software manuals are boring, repetitive, abstruse. These complaints frequently arise from the *operationalist mode* of most technical manuals. *Operationalism* is a scientific methodology aimed at reducing all concepts and terms to a set of experimental procedures and measurements [1, pp. 19-20]. Applied to technical manuals, operationalism reduces human acts to strict causal sequences—A follows B follows C, and so on—with little or no attention given to goals, satisfactions, or challenges. Kenneth Burke's distinction between *motion* and *action* might apply here: *motion* is activity "in the realm of sheer matter," namely, in the "realm of entities that do not respond to words as

such"; *action*, on the other hand, is free activity, guided by purpose and will, and symbolically charged by language and motives [12, pp. 63–67]. Technical writers can choose, of course, to ignore *purpose*, *action*, and *motivation* and to equate the user with "a machine whose switches are flipped and dials are turned." "The imperatives of [the resulting] manual," as Killingsworth, Gilbertson, and Chew point out, "may well lead to the desired result, but resistance may build in users whose curiosity quite naturally distracts them from the straight and narrow path of pure operationalism" [1, p. 20].

Actual readers tend to translate motion into action, and causal sequences into narratives, since, as symbol-makers and users, they inhabit a world filled with purposes, goals, and desires. Even the most causally-oriented technical manual will be read, in part, as a locus of symbolic action, primarily because users not only perform tasks, but *want* to perform them in order to reinforce their self-image and sense of identity. Following Burke, I wish to define *motivation* as any impetus to human action that arises from, or is expressed by, systems of symbols such as everyday language. Readers not only value their ability to interact with the world through symbols, but are attracted to, and are shaped by, texts that extend and refine this power. Writers transform these values into motivations by not forcing authorial readers to assume restrictive and mechanical roles, and instead, embedding them in a narrative which acknowledges their self-image, desires, and need for symbolic action.

### The Authorial Reader as Hero

As previously discussed, the authorial reader of a software manual is very often an ideal reader, one who always understands the writer's instructions, and consequently always performs tasks with complete success. In this ability to meet challenges, overcome obstacles, and generally succeed in accomplishing goals, the authorial reader closely resembles one special, but familiar type of narrative actor: the hero. What a hero is, of course, changes from culture to culture and from one historical period to another. As Mieke Bal points out, the hero of nineteenth-century literature is often a character who "can survive in a hard and ruthless society," while in existential literature, he or she is "anti-bourgeois and politically committed" [11, p. 92]. But some characteristics seem to remain more or less stable: the hero appears more often than other characters and has the greatest impact on events; the hero's physical appearance, psychological profile, motivations, history, and so on are addressed in detail; the hero undertakes special actions such as making agreements, overcoming opposition, solving problems, and so on.

Just as actual readers tend to translate motion into action, and tasks into narratives of achievement, so they tend to distance themselves from reductive, passive roles and identify with the heroic dimensions of the authorial reader. As hero, the authorial reader not only acts on desire and pursues a worthy set of goals,

but also embodies the necessary skills, knowledge, and competencies required to succeed. The *Vp-Expert*<sup>™</sup> instruction manual emplots the authorial audience as just such a hero. The *Introduction* accomplishes this emplotment by direct and indirect means. The opening paragraphs directly emplot the authorial reader by adopting the narratological role of a *sender*, an auxiliary actor who sends the hero on a journey or set of tasks. This sender is the *implied writer*, not the flesh-and-blood person who writes the manual, but the persona, constructed by the text itself, who addresses the authorial reader as "you," wishes them well, and admonishes them to remember their commitment to action [13, p. ix]:

The fact that you've purchased this product indicates that you're interested in exploring the future of applied artificial intelligence in microcomputers. As you become familiar with the problem solving capabilities of *Vp-Expert*, you'll see the great potential of this exciting area of software development.

This writer-sender then assures the authorial reader that the task is not only desirable, but possible [13, p. ix]:

*VP-Expert* allows virtually anyone to build an expert system. Unlike complex AI programming languages, which build expert systems from scratch and require sophisticated programming skills, *VP-Expert* is remarkably simple to use.

And finally, as a final bit of encouragement, the writer-sender promises the aid and support of helpers along the way [13, p. ix]:

*VP-Expert* provides the inference engine, the user interface, the commands—indeed, everything needed to create a working expert system. The only thing you have to do is encode knowledge on a particular subject into a knowledge base. As you'll see, [by] using *VP-Expert*'s English-like rule construction and built-in Editor, this is much easier than you'd think.

The "How This Manual Is Organized" section of the *Introduction* indirectly emplots the actual reader by outlining and summarizing each subsequent chapter of the manual. This overview serves to map out, or plot, an ideal path through the material by revealing the progression of stages marking the journey—or, "exploration," as the manual puts it—that the authorial reader, as hero, will be expected to complete. However, as most writers know, readers often deviate from the path set for them, preferring to skim through a manual and focus solely on sections that interest them. The summary of the "Beginner's Guide" seems to acknowledge—and seeks to curb—this tendency by adding the caveat: "this section of the manual is essential for beginners, and recommended for everyone who will be involved in building expert systems." In many ways, the caveat resembles the traditional "warning" of senders to heroes as they set out on the journey. Besides creating suspense and the possibility of opposition and failure, these warnings reinforce the wisdom, if not the goodwill, of the sender.

## HEROIC CONVENTIONS IN THE *VP-EXPERT*™ MANUAL

*Vp-Expert*™ is a software package designed, as it says, to help the user "create . . . a rule-based expert system" and to "encode the knowledge and judgment of an expert on any subject, then distribute it to others" [13, back cover]. To motivate actual readers to become competent users of the software, the "Beginner's Guide," Chapters 1 to 4 of the *Vp-Expert*™ instructional manual, employs a number of conventions borrowed from heroic narratives.

### Late Point-of-Attack Time Sequencing

Specifically, the "Guide" makes use of a type of time sequencing peculiar to heroic tales: late point of attack. Late point-of-attack narratives start with the outcome of a major event and then work backwards, so to speak, tracing out the sequence of events that led to that outcome [14]. This time structure has one enormous advantage over storylines that begin at the beginning (early point-of-attack): the reader is introduced immediately to a significant and symbolically charged event.

Most heroic narratives, and almost all epics, avoid storylines that develop *ab ovo*, or from the beginning, since epics focus more on a specific set of heroic actions than the entire chronicle of the hero's life. Instead, these narratives begin *in medias res*, that is, in the middle of things, so that the central action of the hero grabs the reader's attention from the outset. Even the modern, low-key heroic structure of the "whodunit" opens with a gripping initial event—a murder—that motivates us to continue reading in order to solve the crime. The success of this genre depends greatly on the symbolism of the initial action: because murder represents a profound violation of the social order, it provides the reader with motives to act out a social imperative (to see justice done) and meet a personal challenge (to solve a profound puzzle or mystery).

The "Beginner's Guide" adapts the late point-of-attack structure to its own purposes. Rather than opening with an explanation of how to create an expert system (learning the inference engine and creating a knowledge base), Chapter 1 begins by having the reader run a completed expert system (an end-user or runtime consultation). The first chapter, then, begins at the end, with a fully functioning expert system. By doing so, the chapter seems to violate the progression of tasks actual readers have come to expect: the movement from means to ends, and from simple, preliminary tasks to more complex, interdependent ones. From an operationalist point of view, such sequencing of tasks might seem ill-advised, if not capricious. From a motivational point of view, however, the sequencing makes perfect sense: it presents readers with a desired outcome (the final product), and then leads them through all the steps necessary to achieve that outcome (creating that product). This narrative structure allows the actual reader to understand, right from the beginning, the benefits of using the software. Indeed, by running a

consultation program, authorial readers get to catch a glimpse of themselves in the future, not as readers, but as competent and accomplished users of the software.

The "Beginner's Guide" proceeds by means of retroversions, or flashbacks, that carefully introduce the reader to the nomenclature, principles, and rationale underpinning the runtime consultation introduced in Chapter 1. Chapters 2 to 4, for instance, outline how the inference engine works, how to use induction to create a knowledge base, and finally, how to develop the knowledge base further once it has been created. The "Final Comments" section of Chapter 1 signals the order and function of these retroversions [13, p. 127]:

Chapter 1 has shown you how to conduct a simple *VP-Expert* consultation, making use of all the available command options. However, it has not shown you how a consultation actually works—"behind-the-scenes"—processes that make it effective. To find out how problems are solved in *VP-Expert*, it is necessary to look at the knowledge base and understand how the inference engine uses a method called "backward chaining" during a consultation.

Of course, most of the tasks outlined in each subsequent chapter move in a predictable, straightforward, and linear fashion. Chapter 2, for instance, takes the reader through a series of steps required to create an induction table, beginning with "entering the editor" and then proceeding to "using the editor" and "building the induction table." The late point-of-attack structure of Chapter 1, however, shapes the actual readership's response to every task outlined in subsequent chapters, and provides a covering motive for the whole manual: to teach readers to create an expert system like the one they were introduced to, and indeed used, in the opening pages.

### *Ekphrasis* and Chapter Summaries

Besides late point of attack, another feature common in heroic, and especially, epic narrative, is *ekphrasis*. An *ekphrasis* is a verbal or written description of a sculpture, painting, tapestry, or some other form of graphic or plastic art. A typical example of *ekphrasis*, taken from classical epic, is the description of the frieze above the temple of Juno in Book I of Virgil's great Latin epic, the *Aeneid*. In this particular episode, Aeneas (the epic hero) enters the city of Carthage and finds a temple dedicated to his chief opponent, the goddess Juno. He "reads" the painting which depicts all the major events that have brought him to Carthage, including, of course, the saga of the Trojan War, in which he lost family and homeland. Embedded in the picture, too, are hints of events yet to happen to Aeneas: his impending love affair with Dido, Queen of Carthage, and his eventual founding of a new civilization—Rome [15, pp. 32-35].

In general, then, an *ekphrasis* serves a number of functions: it interrupts the narrative *flow*, or progression of events, by describing an essentially static object; it embeds one kind of narrative within another, since the object being described

within the story itself depicts a story, complete with actors, events, and outcomes; it cites past events that bear on the hero's mission and thus functions as a milestone for the hero, marking his or her narrative progress; and finally, it points to the hero's future, often providing a warning about temptations and dangers yet to come. As a story-within-a-story, an *ekphrasis* generates its own sets of real and authorial readers. Within the main story of the *Aeneid*, Aeneas function as the *real* reader, the imperfect and limited interpreter of the frieze. Standing in opposition to Aeneas is the *ideal* or *authorial* reader embedded in the painted narrative, the one who understands completely the significance of every figure and event depicted. Indeed, if Aeneas had been ideal reader of the frieze, he would have recognized the figure of Penthesilea, an Amazon leader, understood the symbolic warning about the dangers of male-female relationships, and avoided his tragic love affair with Dido.

The *VP-Expert*™ "Chapter Summaries" and "Final Comments" sections function very much like a classical *ekphrasis*. The summary concluding Chapter 4, for instance, lists all the key tasks that the authorial reader ideally has performed while progressing through that chapter [13, p. 4.42]:

- First, we changed the ASK message . . . .
- Next, we added a DISPLAY clause . . . .
- Then, we expanded the knowledge base . . . .
- Next, another variable, *Preference*, was introduced . . . .
- Finally, the RUNTIME statement was added . . . .

A number of visual clues signal that this is a summary, and, as such, stands outside the rest of the sequential, task-oriented text: the paragraphs lack numbers—the usual sign of task sequencing; extra margins on either side of the summary block the text and set it apart; bullets transform the text into highlights—condensed keypoint that mark the user's progress to date rather than explain procedural details. A number of textual clues, too, reinforce the static, object-like quality of the summary: the combination of sentence adverbs ("First," "Next," "Then," "Finally") and the past tense ("changed," "added," "expanded," "introduced") signal a temporal progression of events that have already been completed, and thus are frozen in time.

All these clues, when taken together, allow the authorial reader to interpret the summary narratologically, as a kind of *ekphrasis*. Like the temple frieze in the *Aeneid*, the *VP-Expert*™ chapter summary interrupts the narrative flow of the task-sequencing; it exists, blocked off from the rest of the text, as a different kind of textual entity; it cites the past achievements of the authorial reader and functions as an indicator of his or her progress; and, finally, and most importantly, it motivates the authorial reader to continue reading, or to accomplish the tasks, master the skills, and acquire the competencies promised in the opening pages by the sender-writer. The motivational dimension of *ekphrasis* resides precisely in

this ability: to provide impetus for future action by recalling the achievements and projecting the success of the hero.

The "Final Comments" provides a similar impetus to action for the authorial reader of the *VP-Expert*™ manual [13, p. 4.43]:

If you followed all the exercises in this chapter, you have now completed a twelve-rule knowledge base, complete with complex rules, DISPLAY text, a PLURAL statement, BECAUSE text, and a RUNTIME statement. But you've by no means witnessed all of *VP-Expert*'s important features. This section was meant to provide an easy introduction to developing a simple knowledge base. Much of *VP-Expert*'s power is yet to come.

By asserting the relations among the actual, authorial, and ideal readers, the word "if" clarifies the actual readership's responsibility: if "you" (the actual reader) undertake certain tasks ("the exercises"), then "you" (actual as authorial reader) will achieve the ideal outcome ("complete a twelve-rule knowledge base"). And for anyone who accepts this undertaking, more challenges and rewards await. Thus the implied writer prompts the authorial reader to future action by promising greater knowledge ("you've by no means witnessed all of *VP-Expert*'s important features") as well as greater abilities and skills ("much of *VP-Expert*'s power is yet to come").

### SUMMARY AND PRACTICAL SUGGESTIONS

So far, I have argued that all writing presupposes both a flesh-and-blood readership and an authorially emplotted, textually bound one; that, in technical writing, actual readers will resist becoming authorial readers if, by doing so, they must adopt reductive, inappropriate, or demeaning roles; that most readers of instructional, tutorial-based software manuals are motivated by—and thus seek out—heroic roles, namely, those with successful outcomes; and finally, that the *VP-Expert*™ software manual, and especially the "Beginner's Guide," attempts to motivate actual readers by emplotting them in a heroic fabula whose conventions are borrowed from epic narrative. In the process of developing this argument, I have turned theoretical constructs borrowed from reader-response criticism and narratology into methodological tools for analyzing the reader-writer relationship within a piece of technical documentation.

Based on this analysis, and on the paradigm derived from the *VP-Expert*™ manual, I now want to suggest five practical guidelines for motivating the readers of instructional software manuals:

- Make instructional manuals task oriented: most readers would rather use software than read about it.
- Avoid operationalist assumptions such as "a manual only needs to contain correct information in the right order." Actual readers live in a world of

symbolic action rather than pure motion and will resist any role that does not transform causal sequences into narratives of progress and success.

- Remember your own role as implied writer. You send the authorial reader on a set tasks. You provide advice, warnings, and helpers to ensure the reader-hero's success. If you fail to carry out this role successfully, the reader may cast you as an undesirable actant, such as an opponent.
- If possible, motivate the actual reader by placing authorial readers in a late point-of-attack time sequence. In this way, actual readers may become familiar with the operation and benefits of the end-product first and will be more patient when reading instructions.
- Summarize chapters, sections, parts, and so on by emphasizing what the reader, as user, has achieved. Such summaries function as an *ekphrasis*, that is, as a reminder of the reader's competencies and progress to date, and provide an orientation to future tasks.

Using reader-response criticism and narratology to analyze technical documentation opens up many opportunities to research the structures of motivation in non-literary writing. Reader-heroes, writer-senders, late point-of-attack time sequencing, and *ekphrasis* are only a few heroic conventions embedded in the *VP-Expert™* manual. Many other heroic conventions, such as the use of epithets (the repetition of adjectives with certain nouns), catalogues (long lists of nouns), preparation scenes (descriptions of the hero's preparation for a journey or battle), and so on, may also find analogues within technical documentation. Common phrases, such as "user-friendly software" for instance, may fix the qualities of a thing in relation to a welcomed outcome in much the same way that often repeated epithets, such as "sharped-edged sword," do in Homeric poetry. Appendices of software functions and graphic insets of upcoming tasks, too, may function as epic catalogues and preparatory scenes, respectively: the first, by cataloguing all the power available to the user through the software; the second, by orienting the reader to future lessons and benefits. Both of these conventions may serve to make the role of the enabled and successful authorial reader-hero more attractive to the actual reader.

Finally, applying literary critical distinctions—in this case, distinctions borrowed from reader-response, narratology, and heroic story-constructions—to technical documentation underscores the value of constant dialogue among writers from different disciplines and professions. How writers emplot authorial readers, why real readers accept or reject particular roles, what roles succeed in which discourse communities—these questions touch on issues important to anyone who wishes to communicate with others. Ideally, research into these issues will help create the framework for a more unified approach to writing and discourse, one that will borrow methodologies from a variety of sources. As writers from different communities share more information, both practical and theoretical, we may see discussions of time, point-of-view, character, plot

structure, and so on become commonplace in technical writing circles. And if we are very fortunate, the intellectual exchange will go both ways, with the analysis of non-literary texts influencing, in turn, the methods and goals of literary critics and criticism.

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Direct reprint requests to:

Professor David Goodwin  
 Centre for Professional Writing  
 Department of English  
 University of Waterloo  
 Waterloo, Ontario, Canada  
 N2L 3G1