



## Lights, Camera, Action!

By

Michael McCollum

*Note: This reprint article was first written in 1999, shortly after Star Wars Episode I, the Phantom Menace, debuted.*

In the summer of 1980, I had a memorable experience. The new *Star Wars* movie, *The Empire Strikes Back*, had just hit theaters, and my wife and I decided to take our two small children to see it one Saturday late in May. Even if you have never lived in Phoenix, Arizona, you probably have heard stories about our weather. It is HOT here. As I remember, the temperature that day was about 105°F in the shade, and there was not very much shade standing in that long line. Altogether, we stood in line for six hours with two small children (7 and 3 years old). We had lunch in line, eating in shifts while seated on the hard cement curb in front of the theater. Every two hours, the line would shorten about one-third as another group was let into the theater for the next showing. Since everyone in my family is a redhead, we all were terribly sunburned by the time we reached the lobby.

Unfortunately, getting into the lobby was only another step in a long process. We stood there for one complete showing of the movie, along with a couple of hundred other people who were jammed together like sheep. We put a load on the lobby air conditioner that I am sure the building contractor had never contemplated. The heat of our bodies and our perspiration turned the place into a fetid swamp in a matter of minutes. Still, it was better than standing in the hot sun and we were able to purchase cold drinks to quench our thirst and ameliorate our suffering.

I noted an interesting psychological factor come into play while waiting for *The Empire Strikes Back*. Most people become irritable when standing in line. Yet, there comes a point where stoicism sets in. Airline pilots refer to this as the "point of no return," which merely means that the distance remaining in the flight is less than the distance traversed. After four hours in the hot sun, we had invested so much time and pain that we were damned if we were going to give up at that point!

All bad things must come to an end, and eventually the doors to the auditorium opened, and we rushed en masse to get the best seats. One hapless moviegoer had on thongs, a very popular form of footwear in Arizona in the summertime. He stepped in a puddle of Coke syrup and stuck. He broke the rubber strap on his shoe trying to pull it free.

After spending six hours in hot, sweaty misery, I was ready to ENJOY that movie! Moreover, I did enjoy it; right up until the moment they froze Han Solo in carbonite and then rolled the credits.

I had reason this past weekend to contemplate our travail of nineteen years ago when Catherine and I decided to repeat history and see the new *Star Wars* movie, *The Phantom Menace*. Being considerably older, we were much less willing to suffer in line to get a seat (the three-year-old child we dragged to *The Empire Strikes Back* recently joined the National Guard. He ships out for basic training in August).

Luckily, things are much more hi-tech now than they were back in the Stone Age before the Reagan administration. We called Movie Phone and ordered tickets by credit card, then drove to Centerpoint Theater in downtown Tempe (our local oversize multiplex), making sure to arrive an hour early in order to get a good place in line. To our amazement, there was no huge crowd milling around in front of the theater. In fact, there were only six people in front of us in line!

I frowned. Where could everyone be? Then I realized that Centerpoint (like most modern, multi-screen theater complexes) now lines people up inside. This allows the moviegoers to wait in air-conditioned comfort while spending money at the snack bar. So, with about fifty minutes to go, we handed our tickets to the young lady at the door and headed up the escalator in search of the line we knew had to be in there.

We found only eight people behind the velvet ropes upstairs in the waiting area. Since the theater holds about 300, we felt no obligation to join them. Instead, we bought Diet Pepsis and a large bag of lightly buttered popcorn, and sat down on a bench to wait.

While I sat on that bench, I munched popcorn, contemplated the implications of what I was experiencing, and made a small mess at my feet with the popcorn kernels that somehow missed my mouth. Here we were, waiting to see George Lucas's latest, much ballyhooed movie a mere five days after its release, and yet, we were having no difficulty getting in! Something was wrong. Could it be that *The Phantom Menace* was not living up to its hype? That did not seem possible after all the buildup it had received. Why, they had played the *Star Wars* trilogy in my company's cafeteria three days in a row to drum up interest. Surely, attendance could not have dropped off so quickly that they could not fill a Sunday afternoon matinee only 120 hours after the movie's initial release!

Having had the awful thought that the movie might be a stinker, I set about considering other possibilities. It was then that I realized just how much things have changed since 1980. For example, my hair is no longer as red as it used to be (some of my more rude friends claim that it is not red at all). More to the point, during that hot summer nearly 20 years ago, *The Empire Strikes Back* was in limited release. If you lived in the Phoenix metropolitan area, the only place you could see it was at the Cine Capri on Camelback (recently demolished).

In 1999, Episode 1 of the *Star Wars* tri-trilogy (what else would you call a series of nine potential movies?) was released to 2400 screens nation-wide and is playing on at least 50 in the Phoenix area. It begins somewhere once each hour throughout the day, starting at 10:00 AM and going to midnight. Therefore, I reasoned, the crowds are no smaller than they were two decades ago, there are just more places for people to sit. George Lucas racks up his billions even faster and I do not have to stand in the hot sun (although the weather so far this May has been unseasonably cool in Arizona). That is what I call progress.

After awhile, we added ourselves to the slowly growing queue and were let into the theater a few minutes later. The theater filled rapidly, but there were still some empty seats by the time that familiar theme floated out of the speakers and text began to scroll up the screen to the vanishing point. I forgot my concern, sat back, relaxed, jammed more popcorn into my face, and prepared to enjoy myself. *[If you have not yet seen The Phantom Menace and do not want to have me spoil your movie-going experience, now would be a good time to jump to the next section.]*

So how did I like it? I thought it was the most spectacular demonstration of computer animation that I have ever experienced in a movie. George Lucas has built several entire worlds with a level of detail that rivals the real thing. In fact, I often found myself watching the background rather than the characters. I was so distracted by the technical *tour d'force* that it took me half an hour to realize that I was not enjoying the movie. Considering all of the action on the screen, I found the pace inexplicably slow. Nor was I the only one with this reaction. About two-thirds of the way through, I caught my wife looking at her watch. Finally it ended and I found that the new *Star Wars* movie was not up to my expectations.

So what went wrong?

The computer graphics went wrong. I remember the original *Star Trek* movie, *Star Trek, the Abomination* — no, it was not called that, but it should have been. We sat for an interminable time watching out-of-focus pastel lights and listening to weird mood music. Having spent so much money on special effects, the producers were loathe to cut even a few seconds of them, so they tried to pretend something was going on while they rolled the effects through the projector. We, the audience, were not fooled.

George Lucas's new movie has a much more sophisticated version of the same problem. It is so packed with computer wizardry that it leaves little room for motivation or character development. All of the human characters in *The Phantom Menace* are constructed of double thick, premium-grade cardboard. The Jedi knights are so self-assured that they seem to be sleep walking, the queen looks like what she is, a 17-year-old girl, and the conflict is so sketchily drawn that it seems cartoonish. Worse, Lucas tries to make you think there is a plot by having his characters mouth some bit of meaningless jargon and then have all of the other characters nod seriously, as though they actually know what they are talking about. Again, we are not fooled. Meaningless jargon remains meaningless, no matter how adroitly the line is delivered.

Compared to the people, the computer-generated characters are full, rounded personalities. Unfortunately, their personalities are irritating, and their function as comic relief early in the movie ill suits them for their roll as saviors of the situation later in the plot. The main "cartoon" character, Jar Jar Binks, reminded me too much of Roger Rabbit, and unfortunately, of Steppin' Fetchit. And, oh yes. They have the nine-year-old kid doing the chariot scene from *Ben Hur*, and he is way too young for that. In addition, I recognized the engines that propel his chariot ... er, pod ... around the course. It looked to me like a Pratt & Whitney TF-30 turbojet, on which I once worked. In addition, Queen Amidala's private yacht looks a lot like an SR-71, but with a better paint job.

I could go on badmouthing *The Phantom Menace* for another few thousand words, but that is not the subject of this month's article. However, as long-time readers know, I often use examples from movies to make a point because there is a much greater chance that most of us have seen the same movie than there is that we have read the same

book. I had hoped that *Star Wars, Episode I*, would provide pithy examples with which to explain my points while discussing writing action scenes. Considering that I found it slow moving despite the numerous action scenes, it falls short in that department, too.

So, we will continue our quest for knowledge, but rely on other cinematic efforts to provide us with enlightenment. In passing, however, I will end with just one suggestion: “Next time, George, spend a bit less money on the computerized special effects and a lot more money on the writing. If you need me, I’m available!”

### Someone Else Having A Hard Time Far Away!

As noted, our subject this month is writing action scenes. This is not the first time we have visited this particular hall in the pantheon of writers’ skills. We have touched on action requirements in many of our past discussions. Nor are the needs of action scenes qualitatively different from the needs of other scenes. All scenes have a beginning, middle, and an end. Action scenes differ primarily in the speed at which things happen.

In a contemplative scene, the pace is slow, methodical, and restful. The reader is placed into a trance of introspection. In a love scene, the mood is languorous, romantic, sexy, erotic. Love scenes affect organs substantially to the south of the brain. Action scenes are none of the above. They are immediate, driving, moment-to-moment, hurried, and brisk. The action scene is aimed at neither the cerebellum nor the gonads. Its target is the pituitary and its goal is to inject a healthy dose of adrenaline directly into the reader’s bloodstream. When an action scene works, the reader’s heart beats faster, his or her breathing accelerates and a thin sheen of perspiration forms on the skin where it produces a delicious chilling effect. If done properly, the heart’s pounding will actually accelerate throughout the scene, until by the time the reader reaches the climactic end, they can actually feel their heart beating in their temples and the carotid artery in their necks. Often an involuntary gasp will escape the reader’s throat as adrenaline floods the bloodstream. Afterward, the reader sits in his or her favorite easy chair and luxuriates in a pleasant lassitude that lasts until the next action scene.

To be technical about it, the technique for writing action scenes is a subset of the overall subject of pacing, a skill that we explored in depth in “Rhythm In Fiction.” In that article, we developed a mental model for perpetrating an act of fiction — that is, developing a story about “someone else having a hard time far away.” For those who have not yet read that article, I will repeat the description of the mental model:

*“... A story is a series of ever escalating introductions, developments, and climaxes. A good mental model for this is to imagine that you are going to climb a mountain. The big mountain is surrounded by a series of foothills of ever increasing elevation. You start in the valley at the local hunting lodge. There you put on your pack and start up the gently rising trail leading into the forest. This is the story’s introduction. You climb upward for an hour or so until you reach the top of the first hill. From there you can rest and look down at the lodge in the valley. In front of you lies another valley; one that is slightly higher in elevation than the one you just left. So you cinch up your pack and start down the trail until you wade through a small brook and find that you must climb again. The trail is a bit*

*steeper now, and the new hill somewhat taller than the last one. When you reach the summit of the second hill, you are a bit more winded, and when looking back toward the lodge, you are surprised at how far you have come. But, of course, there is a third valley in front of you, and beyond it, a third, and even taller, hill.*

*After a series of these ups and downs, you find that you are in the high mountains. You no longer walk; you climb using hands and feet. Eventually, you find yourself hanging by your fingertips as you scale a vertical cliff to reach the highest summit of the mountain range.*

*In this mental model, the summit of each hill is the climax of a single scene or chapter. You spend the whole scene or chapter climbing the hill, only to find when you get to the top that there is another, taller hill beyond. Nor is progress always upward. After you reach the end of a scene, you spend some time resting and introducing another scene. Eventually, of course, you must begin to climb the hill beyond by developing to another climax. When you reach the next climax (the summit of the next hill), you end the scene and begin the cycle over again. As you go along, however, the climaxes become a little more intense each time as the problems to be overcome become progressively larger.*

*In this way, the story goes through a series of ups and downs, but with an ever-increasing intensity. By the time you are on the face of a vertical cliff, hanging by your fingertips with your feet dangling over a thousand foot abyss, you are at the main climax of the story. You reach the highest summit just as you reach the end of the main climax. Your characters win their battle with the forces of evil as they barely manage to pull themselves over the top of that final cliff, to lay exhausted for a moment at the top of the mountain. They have won, but have expended their last reserve of energy doing it.*

*After that, there is the denouement, which is where the climbers admire the view from the mountaintop and then check all of their equipment in preparation for the long hike back to the hunting lodge. The story ends as the characters take that first step down the mountain. We do not show the downward journey because the reader saw all of that territory on the trip up, and we don't want to bore them. So, instead of giving them the same blow-by-blow account that we did on the upward hike, we end the story by saying, "It was a tired band of climbers who finally stumbled into the hunting lodge just after dark."*

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As noted in our mountain climbing mental model, there are times in a story when you rest your weary bones. You sit on a rock by a babbling brook with your hiking boots off, dangling your feet in the cold water. At these points in the story, the writer injects background, develops character, or just puts the plot into idle while the readers catch their collective breath. These are not the scenes on which we will concentrate this month. These contemplative and background-building scenes are vital to any story and their elimination will leave the readers feeling cheated. However, our subject is action, and action scenes leave no one any chance to catch their breath. In an action scene, you rush

from point to point, never halting and seldom slowing even to a trot. Action involves an all-out sprint toward the finish line. “Never a dull moment,” is not merely a cliché, but a commandment in these scenes. For to slow or to halt is to risk having the reader notice that the hero is performing unlikely feats of strength and endurance, and that could well jar them out of their willing suspension of disbelief.

When the action begins, the time for thinking is at an end. Characters and readers race through words at a breathless, breakneck pace, rushing along without pause or hesitation.

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### Action Movies

There is a sub-genre in Hollywood known as the “action movie.” These began as extended car chases (such as in Steve McQueen’s *Bullet*), but have over the past few decades generally devolved into extended gun battles. One of the most popular action movie series of recent years has been Bruce Willis’s *Die Hard* series. In this series, John McClain, a New York City detective with a screwed-up family life habitually stumbles into a massive criminal conspiracy of some kind. In the first episode, McClain defeats a gang of terrorists who have taken over a skyscraper; in the second, he thwarts a band of renegade soldiers intent on destroying Dulles International Airport; and in the third, the villains are a group of mercenaries out to loot the United States’ gold reserves.

Despite the fact that more than 80% of the running time of these movies involves physical action, the other 20% of the movie is devoted to quiet moments of reflection. It is during these moments when we become acquainted with the characters, usually while McClain is also pulling steel splinters out of his epidermis. That is the reason these movies work. It is insufficient for the hero to defeat the villains. To be successful, a movie must make the audience feel empathy for the protagonist while he is engaged in his feats of heroism. Bruce Willis’s character in *Die Hard* has a sufficiently messed-up personal life that everyone is able to identify with him and to fear for him when he finds himself in mortal danger — which he does, a lot!

However, we will not use *Die Hard* or any other “shoot ‘em up” to discuss writing action scenes. To do so would leave the impression that all you have to do to write an action scene is whip out your pistol every few pages and gun someone down. This is very far from the truth. In fact, it is so wrong that I am moved to establish one of those universal laws with which I pepper these articles from time to time:

#### McCollum’s First Law of Action: “Violence Does Not Equal Action!”

But wait. Didn’t I just say that modern action movies involve extended gun battles? Mostly, they do, but it isn’t the gun battles that make them action movies. An action movie or book is one that relies on the characters “doing” something rather than “contemplating” something. It is an action movie because it relies heavily on the consequences of the characters *taking action*. More explicitly, the characters must not only act, but they must do so in a hurry and under pressure. They must literally “hop” from moment to moment within the scene. There is no time to think; only to do. (This is the way it is in combat, as any veteran will tell you.)

A great many unsuccessful movies rely on gun battles to disguise the fact that they lack a plot. If two groups of characters encounter one another and immediately whip out their pistols and begin firing, and if this happens time after time after time, then the audience quickly loses interest. Drawing a gun on a complete stranger and opening fire is an act with extreme consequences and most people will think long and hard before doing it. If your characters are completely unconstrained in this respect, then the readers will quickly disengage from that character. People do not like what they don't understand.

No, action involves pacing more than it involves guns. So, let us analyze a different sort of action movie, one that has not a single firearm in evidence. In fact, it is one of my favorite movies, although I have never seen it on a big screen.

### Indiana Jones and the Science of Meteorology

In 1996, Jan de Bont directed *Twister*, starring Bill Paxton and Helen Hunt. Although the movie was doing extremely well at the box office and had good reviews, I did not see it in the theater because one of my coworkers reported to me that it “was a terrible movie with no plot.” That was my impression until I rented it one evening when I was not working on my web site. If I can be allowed a small pun, it “blew me away” when I saw it.

My coworker's analysis that “it had no plot” was not accurate. *Twister* has a very basic plot. It is an example of what I refer to as a “moment-in-time” story. A moment-in-time story takes place over a period of a few hours or a couple of days. It involves a well-defined sequence of events so tightly packed together that the reader or viewer has little time to think or analyze. Moment-in-time stories are driven by a frenetic pace and are composed primarily of action scenes separated by brief interludes of calm (usually very brief interludes). Another moment-in-time movie that I really enjoyed was Disney's *The Rocketeer*, which takes place over two days in 1939 Los Angeles.

In case you have not seen it, the plot of *Twister* is as simple as the action is fast. Bill Harding (Bill Paxton), an ex-tornado-scientist-turned-weatherman, is finalizing his divorce from Jo Harding (Helen Hunt), a still-tornado-scientist, and has to get his divorce papers signed. He drives out into the field where Jo and her misfit crew of colleagues are preparing to chase a tornado in order to get an instrument package into the funnel cloud where they can record wind speed, direction, etc.

About two minutes after Bill and his fiancée, Melissa (Jamie Gertz), arrive on the scene, one of the scientists screams “funnel cloud forming twenty miles up the dry line!” and the whole crew jumps into a convoy of ramshackle vehicles and goes racing up the highway at 80 miles per hour.

From then on, it is one tornado after another. I believe I counted six in the span of 24 hours, and each tornado is bigger and more destructive than the last. These tornadoes pick up cars, trucks, cows, houses, fully loaded gasoline tankers, massive farm machinery, and literally gigatons of corn stalks as they blast their way through the Kansas countryside. They occur so frequently that Bill has difficulty finding the time to get his divorce papers signed, not to mention almost getting killed a dozen times or more.

After each tornado there is a brief respite in which de Bont develops the characters and fills in the background. Jo, it turns out, is still in love with Bill and is not happy to see his new fiancée. Bill still loves chasing tornadoes and is defensive about his

new job as a television weatherman, and after a few dozen near death experiences, he realizes that he is still in love with his soon-to-be ex-wife. None of these interludes is long enough to allow the viewers to become bored. You barely have time to calm down from the last scrape with death when the radio announces another twister forming somewhere and off the caravan races again.

There is one exception to this pattern of quickie interludes. That comes when the team stops off in Wakita, Kansas, to visit “Aunt Meg” (Lois Smith). Aunt Meg is Jo’s aunt. The tornado chasers stop at her house for lunch and to get cleaned up after getting soaked by rain and mud during the second (or was it the third) close encounter with a twister. It is during the interlude at Aunt Jo’s that we come to realize that Jo still loves Bill and that she chases tornadoes because she feels guilty about the death of her father (who was sucked up by a tornado in the prologue). The interlude lasts perhaps six or seven minutes, time necessary to allow the audience to decompress after the non-stop action that has characterized the movie up until that point. It also gives the crew a chance to explain the Fujita Scale to the audience. The Fujita Scale measures the severity of tornadoes. Soon, however, the radio squawks again and the team races for their cars and barrels cross-country after the next tornado.

Of course, you know that Aunt Meg is not safe. Sure enough, that night a massive tornado destroys a drive-in theater, just misses the garage in which the team has taken refuge, and heads straight for Wakita, Kansas. The night tornado is especially effective at building tension because the characters do not see it coming until it is practically on top of them. We spend several minutes watching the hair on the back of their necks (and ours) begin to tingle with anticipation, however. We are then treated to the sight of a picturesque, mid-western town in shambles, with houses smashed and cars hanging out of trees.

Throughout the movie, the scientists have been leaving instrument packages in the path of tornadoes, only to have them smashed or destroyed without being sucked up. The movie’s climax comes when, after surviving the gasoline tanker nearly falling on them, dodging giant farm combines as they rain down from the sky, and actually crashing through a frame house that rolls across the highway just as they get there, our hero and heroine finally get one of their “Dorothy” packages into the biggest and meanest tornado anyone has ever seen.

There is a brief moment of triumph as the heroes and their team congratulate themselves on a mission accomplished. Bill and Jo’s jubilation is quickly dampened, however, when the tornado changes course and heads right for them. What follows is one of the strangest chase scenes on film. The two protagonists run for cover through tall corn with a tornado hot on their trail. The tornado passes directly over them and they only survive by lashing themselves to a water pipe sunk deeply into the Earth. The climax comes with the two scientists hanging upside down as the tornado tries to suck them up. Beneath their feet (which are pointed skyward at the time) is the blue sky visible through the top of the funnel.

Obviously, a movie that uses tornadoes as its villains could have been shot in several ways. An obvious one is to shoot it as a morality tale in which nature destroys that which an arrogant human race has built. De Bont could have focused on the terror anyone facing such a monster storm will naturally feel. However, he did neither of these. He made his team of tornado chasers a bunch of enthusiastic maniacs who relish the



high-speed chase and the inherent danger involved in getting anywhere near such a storm. It is all a front, of course. Occasionally, the fear shows through and discouragement overcomes even the most intrepid of the adventurers. That is one of the things that make the movie work. The maniacs are human after all. However, these self-doubts seldom last more than a minute or two of screen time and then it is back in the caravan and chase after the next twister.

The pace of the movie is fast and unrelenting. The characters rush everywhere as they pursue the fast moving storms. They drive across fields and through woods, taking any goat track that looks like it is going in the direction they are headed. In addition to wind-blown debris, which varies from the size of small hailstones up to the aforementioned house, the heroes nearly have several traffic accidents. The movie is accompanied by a driving score that is designed to keep the adrenaline pumping and the heart pounding.

### So How Do I Get That Same Feeling In My Writing?

Not surprisingly, *Twister* was written by Michael Crichton and the executive producer was Steven Spielberg. Moreover, while we authors do not usually have mood music in our books, that does not mean that we can't use the same techniques that producers of action movies use to make their epics. After all, the movies are merely a less literate form of literature.

The mechanical techniques involved in writing action scenes are straightforward. Use short sentences, a lot of action verbs and few adjectives and adverbs. In fact, input "ly<space>" into your word processor's search function and look at all words ending in "ly." When you find one, consider taking it out. Those are the modifiers that weaken your writing, and words you can frequently do without. Although a good general rule for any kind of scene, this is especially important in action scenes where verbal clutter equals a slowing of the pace.

An action scene is not a good place for many passive sentences, either. In action, there is a great deal of DOING and very little BEING DONE TO. "Run, Jane, run!" is the archetypal sentence for an action scene. You can also accelerate the pace by keeping your words to a minimum number of syllables and your paragraphs less than about ten lines long. One thing you do not want is a two-page paragraph strung together out of several fifty-word sentences. An action scene is no place to demonstrate your erudition and your facileness with the language.

There are two basic methods a writer has for building anticipation in the reader. These are suspense and tension. Suspense is a long-term strategy. You build suspense throughout a book, giving a hint of important things to come from time to time, but never fully revealing your strategy until the climax. Tension is more immediate. Placing the characters (and therefore the readers who identify with them) into physical danger will do it. So will setting up a conflict. It is the tension that releases adrenaline into the bloodstream as the body automatically goes into its "fight or flight" reflex in response to a threatening situation.

What an action scene does is develop that tension by showing the reader a physical sequence that alarms the subconscious. It doesn't matter if the reader is sitting in their favorite easy chair with their feet propped up. Their brains respond to a fake

stimulus almost as well as real ones. By providing an engaging description of action, you get the pituitary gland to secrete adrenaline, which in turn generates all of the symptoms of physical excitement.

However, creating tension is insufficient to provoke the reaction we are looking for. For having created tension, we must then release it in order to trigger the “adrenaline high” that is the natural side effect of our drug of choice. That is the function of the action scene. You put the characters into danger, conflict, or any situation that the readers find uncomfortable. You hold them in that situation for a few dozen, hundreds, or even a few thousand words, and then you release the tension. The readers breath a huge sigh of relief and their bodies begin to process the adrenaline out of their blood streams. They lapse into that delicious “after action” feeling that all readers crave.

When writing action, think of yourself as Mickey Spillane. He had a fully completed novel manuscript in the trunk of his car one day when the car was stolen. He is reported to have responded to the news by exclaiming, “There goes three weeks’ work shot to hell!”

A Mickey Spillane book is almost all action scenes, and though I doubt you want to emulate his style, when beginning an action scene of your own, it is good to emulate his attitude.

### Action Writing: An Example

Often when reading about something as complex as the Art of Writing, it helps to have an example of what it is we are talking about.

To that end, this month we include an excerpt from *Antares Dawn* as an appendix. The passage selected is the climactic space battle that takes place at the end of the book.

When reading the sample scene, pay attention to the words and the sentences, and feel how the mood changes as during the transition from preparation for battle to all-out war.

Feel the driving intensity of the action and the breakneck pace that is the hallmark of an action scene.

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The End

Appendix: Excerpt from *Antares Dawn*

The following excerpt is the climactic battle scene from *Antares Dawn*. It is not important who is fighting, or why. As you read the scene, concentrate on the length of words and the sentences.

The scene begins with final preparations for battle. This section moves at a standard pace where we observe the small fleet of ships dubbed “*Bardak’s Bastards*” getting ready to meet the invaders.

Then, as the battle begins, the pace accelerates and the sentences become shorter and more staccato. This is not to say that there are no longer sentences in the description of the battle, but rather, that the proportions of long sentences to short are skewed in the direction of shorter sentences.

During the actual battle, almost all of the sentences are descriptive of the actions the ships are taking and the effect their weapons are having on the enemy. As you read, try to feel the change in mood and pace.

Quantitatively, if you run readability statistics on the portion of the excerpt leading up to the battle and then to the battle itself, you discover a change of two whole grade levels in the writing level. That is, the section leading up to the battle has a readability index of 8.5, which is approximately the level at which I write. An 8.5 means that readers must read at least an eighth grade level in order to understand what I have written. Once we enter the battle itself, the readability index drops to 6.5, meaning that the sentences are shorter, less complex, and can be read by a person with the reading skill of a sixth-grader.

This statistical anomaly is not an accident. It is a direct result of the change in style that accompanies the onset of action. Long, complex sentences get a higher readability index; short, simple sentences get a lower

Now, the Battle of Sandar from *Antares Dawn*.

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“Two minutes to first contact!”

Drake listened to Duke Bardak’s calm announcement with the appreciation of a fellow professional. The Sandarian commander seemed as relaxed as if he were on a training cruise. Yet, Bardak’s flagship, *Vindicator*, was at the center of the first wave. On the main viewscreen, *Vindicator’s* green star was surrounded by icons representing the other ships of the first group. The green symbols moved inexorably toward a similar group of red symbols.

“First Wave. Begin repositioning missiles, now!”

The box-like symbols that represented the two converted freighters were suddenly surrounded by a cloud of yellow sparks. The Ryall fleet was still almost one million kilometers in front of the first wave, far beyond effective missile range. Bardak’s order involved dispersing all of the first wave’s nuclear-tipped ordnance into space where they would wait for the Ryall attack force to come within range. It was essentially the same tactic that the Ryall planned for Sandar with their attack carriers. Even if the missiles found no targets, they would force the Ryall gunners to waste ordnance on missiles, ordnance that might otherwise be directed against Sandarian ships.

The eight red symbols on *Discovery's* main screen were quickly surrounded by missile markers of their own. Drake queried the computer and was not surprised to see that all of the Ryall missiles had come from the two blastships. It had been too much to hope that the enemy would waste some of their attack carriers' ordnance on *Bardak's Bastards*.

"Thirty seconds," Bardak said over the fleet circuit. "All crews, stand by. Twenty seconds ... ten ... five, four, three, two, one. Commence firing!"

One of Drake's auxiliary screens was suddenly alight with the violet flash of Ryall lasers and the white bursts of fusion warheads. He ignored the distraction. If he lived, he would watch the pyrotechnics on playback. A space battle is best comprehended in schematic form. The unleashed lightnings are pretty, but largely irrelevant. If the image has time to pass from eyes to brain, then the weapon has missed its target. The main bridge viewscreen was alive with lines representing the contending forces. As Drake watched, one of the symbols representing a Sandarian interceptor winked out. Almost as quickly, one of the missile freighters was destroyed. An instant later, the second freighter followed it into oblivion. Suddenly, one of the Ryall icons disappeared from the screen. Unfortunately, it was not one of the attack carriers. A quick glance at his readout screen showed Drake that it had been an enemy heavy cruiser that had been destroyed.

He watched as another Sandarian interceptor disappeared. Two armed scouts followed their parent a few seconds later. Then the first wave was in among the Ryall and the impossible happened. The attack carrier on the Ryall right flank exploded.

"My God!" an unidentified voice yelled over the intercom. "One of the scouts rammed the damned thing!"

"Stop that chatter!" Drake ordered.

He watched as a single interceptor and two scouts sailed past the Ryall fleet and began pouring ineffective laser and antimatter plasma fire into the Ryall fleet. The surviving interceptor was *Vindicator*.

The voice of the second wave commander erupted from his helmet phones: "Second wave, launch missiles."

Again, the deadly swarm of tiny furies rushed forth from *Bardak's Bastards*, and again an answering swarm jumped away from the Ryall escorts. There were suddenly the same symbols of battle and death on the screen. The three interceptors of the second wave fixed themselves on one of the attack carriers and fired with every weapon at their disposal. Their escorts chose the second carrier and did the same.

This time it was the smaller ships that began winking out of existence first. Apparently, the loss of the attack carrier had taught the Ryall respect for their tiny opponents. One, two, then three were gone in an instant. One of the destroyers exploded. Another's marker began flashing to indicate that the ship had been disabled. Two seconds later, the damaged craft disappeared from the screen.

The interceptors continued to bore in. Their lasers flashed bright violet, while invisible beams of antimatter arced across space at nearly the speed of light. Millions of bits of metal were launched from electromagnetic cannons and sprayed wholesale into the paths of the oncoming Ryall. Their efforts were to no avail.

When it came time for the second wave of Sandarian ships to penetrate the Ryall formation, there were no survivors left to do so. Fourteen ships and auxiliaries, and more than five hundred men and women, had been turned into expanding clouds of plasma.

As the last of the second wave was being beamed into vapor, Drake keyed the ship-to-ship circuit. "Third wave. All captains, report status!"

There was a quick flurry of voices as the fleet around *Discovery* reported their willingness to engage in battle. The last to report in was Lieutenant Hall's *Catherine*.

"Watch yourself out there, Philip."

"Will do, Captain. Give 'em hell!"

Drake licked dry lips inside his pressure helmet as he watched the Ryall close on his own wave of defenders. Just before the Ryall entered lethal range, he gave the order to launch missiles. *Discovery* bucked as salvo after salvo rushed away toward the Ryall fleet. A few seconds later, Bela Marston said over the intercom:

"All missiles launched, Captain."

"You have the conn, Mr. Marston," Drake replied. "Give them hell!"

"Aye aye, sir."

In truth, it was *Discovery's* computer that was flying and fighting the ship. No human being could react even one-thousandth as quickly as was needed. However, humans could observe trends and redirect strategy, which is what Marston's experts in the Combat Control Center were doing.

Drake watched the screen as the battle passed out of his control. For him, it was as though time had slowed. Where before it had been a conflict of lightning-like thrust and parry, now the battle seemed suspended in syrup. *Discovery* fought on automatically while red and green icons moved toward each other on the screen. One of the third wave defenders disappeared. Drake noted with a pang that it had been one of *Discovery's* armed scouts. The next ship to die was a Sandarian long-range scout. A fusion burst went off close enough abeam that light filled the outside screens and the radiation detector's chatter became a roar. Then Drake's pressure suit went rigid around him as air suddenly departed the control room.

"We've been holed at Bulkhead Sixteen. Damage control responding. Emergency Medical Teams to Compartment Alpha-Twelve, immediately!" came the emotionless voice on the interphone. Drake glanced down at his status board to see red lights awash across its face. As he did so, another voice screamed in his ears:

"*We got one! We got one!*"

Drake looked back at the screen to see that a miracle had occurred. One of the attack carrier markers was fading swiftly from the screen. Drake suppressed the surge of joy that he felt and ordered all fire concentrated on the sole remaining attack carrier.

Even as the words left his mouth, he knew that he was too late. The opposing lines of ships were drawing too close together on the screen. The

formations were near minimum approach distance. The formations were about to interpenetrate and the third attack carrier was unscathed!

Then, unbelievably, just as *Discovery* came abreast of the Ryall fleet, the last of the attack carriers exploded in a cloud of plasma. Two surviving Ryall blastships and two cruisers flashed past and were gone as though they had never been. Drake held his breath and slowly counted off twenty-five seconds. Only then, when the fleeing Ryall ships had once again passed out of range, did he breath a sigh of relief.

The battle was won and he was alive to tell the tale.

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### NOVELS

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#### **1. Life Probe - <sup>US</sup>\$5.00**

The Makers searched for the secret to faster-than-light travel for 100,000 years. Their chosen instruments were the Life Probes, which they launched in every direction to seek out advanced civilizations among the stars. One such machine searching for intelligent life encounters 21st century Earth. It isn't sure that it has found any...

#### **2. Procyon's Promise - <sup>US</sup>\$5.00**

Three hundred years after humanity made its deal with the Life Probe to search out the secret of faster-than-light travel, the descendants of the original expedition return to Earth in a starship. They find a world that has forgotten the ancient contract. No matter. The colonists have overcome far greater obstacles in their single-minded drive to redeem a promise made before any of them were born...

### **3. Antares Dawn - US\$5.00**

When the super giant star Antares exploded in 2512, the human colony on Alta found their pathway to the stars gone, isolating them from the rest of human space for more than a century. Then one day, a powerful warship materialized in the system without warning. Alarmed by the sudden appearance of such a behemoth, the commanders of the Altan Space Navy dispatched one of their most powerful ships to investigate. What ASNS Discovery finds when they finally catch the intruder is a battered hulk manned by a dead crew.

That is disturbing news for the Altans. For the dead battleship could easily have defeated the whole of the Altan navy. If it could find Alta, then so could whomever it was that beat it. Something must be done...

### **4. Antares Passage - US\$5.00**

After more than a century of isolation, the paths between stars are again open and the people of Alta in contact with their sister colony on Sandar. The opening of the foldlines has not been the unmixed blessing the Altans had supposed, however.

For the reestablishment of interstellar travel has brought with it news of the Ryall, an alien race whose goal is the extermination of humanity. If they are to avoid defeat at the hands of the aliens, Alta must seek out the military might of Earth. However, to reach Earth requires them to dive into the heart of a supernova.

### **5. Antares Victory – First Time in Print – US\$7.00**

After a century of warfare, humanity finally discovered the Achilles heel of the Ryall, their xenophobic reptilian foe. Spica – Alpha Virginis – is the key star system in enemy space. It is the hub through which all Ryall starships must pass, and if humanity can only capture and hold it, they will strangle the Ryall war machine and end their threat to humankind forever.

It all seemed so simple in the computer simulations: Advance by stealth, attack without warning, strike swiftly with overwhelming power. Unfortunately, conquering the Ryall proves the easy part. With the key to victory in hand, Richard and Bethany Drake discover that they must also conquer human nature if they are to bring down the alien foe ...

### **6. Thunderstrike! - US\$6.00**

The new comet found near Jupiter was an incredible treasure trove of water ice and rock. Immediately, the water-starved Luna Republic and the Sierra Corporation, a leader in asteroid mining, were squabbling over rights to the new resource. However, all thoughts of profit and fame were abandoned when a scientific expedition discovered that the comet's trajectory placed it on a collision course with Earth!

As scientists struggled to find a way to alter the comet's course, world leaders tried desperately to restrain mass panic, and two lovers quarreled over the direction the comet was to take, all Earth waited to see if humanity had any future at all...



## 7. The Clouds of Saturn - US\$5.00

When the sun flared out of control and boiled Earth's oceans, humanity took refuge in a place that few would have predicted. In the greatest migration in history, the entire human race took up residence among the towering clouds and deep clear-air canyons of Saturn's upper atmosphere. Having survived the traitor star, they returned to the all-too-human tradition of internecine strife. The new city-states of Saturn began to resemble those of ancient Greece, with one group of cities taking on the role of militaristic Sparta...

## 8. The Sails of Tau Ceti – US\$5.00

*Starhopper* was humanity's first interstellar probe. It was designed to search for intelligent life beyond the solar system. Before it could be launched, however, intelligent life found Earth. The discovery of an alien light sail inbound at the edge of the solar system generated considerable excitement in scientific circles. With the interstellar probe nearing completion, it gave scientists the opportunity to launch an expedition to meet the aliens while they were still in space. The second surprise came when *Starhopper's* crew boarded the alien craft. They found beings that, despite their alien physiques, were surprisingly compatible with humans. That two species so similar could have evolved a mere twelve light years from one another seemed too coincidental to be true.

One human being soon discovered that coincidence had nothing to do with it...

## 9. Gibraltar Earth – First Time in Print — \$6.00

It is the 24th Century and humanity is just gaining a toehold out among the stars. Stellar Survey Starship *Magellan* is exploring the New Eden system when they encounter two alien spacecraft. When the encounter is over, the score is one human scout ship and one alien aggressor destroyed. In exploring the wreck of the second alien ship, spacers discover a survivor with a fantastic story.

The alien comes from a million-star Galactic Empire ruled over by a mysterious race known as the Broa. These overlords are the masters of this region of the galaxy and they allow no competitors. This news presents Earth's rulers with a problem. As yet, the Broa are ignorant of humanity's existence. Does the human race retreat to its one small world, quaking in fear that the Broa will eventually discover Earth? Or do they take a more aggressive approach?

Whatever they do, they must do it quickly! Time is running out for the human race...

## 10. Gibraltar Sun – First Time in Print — \$7.00

The expedition to the Crab Nebula has returned to Earth and the news is not good. Out among the stars, a million systems have fallen under Broan domination, the fate awaiting Earth should the Broa ever learn of its existence. The problem would seem to allow but three responses: submit meekly to slavery, fight and risk extermination, or hide and pray the Broa remain ignorant of humankind for at least a few more generations. Are the hairless apes of Sol III finally faced with a problem for which there is no acceptable solution?

While politicians argue, Mark Rykand and Lisa Arden risk everything to spy on the all-powerful enemy that is beginning to wonder at the appearance of mysterious bipeds in their midst...

### **11. Gibraltar Stars – First Time in Print — <sup>US</sup>\$7.50**

The great debate is over. The human race has rejected the idea of pulling back from the stars and hiding on Earth in the hope the Broa will overlook us for a few more generations. Instead, the World Parliament, by a vote of 60-40, has decided to throw the dice and go for a win. Parliament Hall resounds with brave words as members declare victory inevitable.

With the balance of forces a million to one against *Homo sapiens Terra*, those who must turn patriotic speeches into hard-won reality have their work cut out for them. They must expand humanity's foothold in Broan space while contending with a supply line that is 7000 light-years long.

If the sheer magnitude of the task isn't enough, Mark and Lisa Rykand discover they are in a race against two very different antagonists. The Broa are beginning to wonder at the strange two-legged interlopers in their domain; while back on Earth, those who lost the great debate are eager to try again.

Whoever wins the race will determine the future of the human species... or, indeed, whether it has one.

### **12. Gridlock and Other Stories - US\$5.00**

Where would you visit if you invented a time machine, but could not steer it? What if you went out for a six-pack of beer and never came back? If you think nuclear power is dangerous, you should try black holes as an energy source — or even scarier, solar energy! Visit the many worlds of Michael McCollum. I guarantee that you will be surprised!

## Non-Fiction Books

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### **13. The Art of Writing, Volume I - US\$10.00**

Have you missed any of the articles in the Art of Writing Series? No problem. The first sixteen articles (October, 1996-December, 1997) have been collected into a book-length work of more than 72,000 words. Now you can learn about character, conflict, plot, pacing, dialogue, and the business of writing, all in one document.

### **14. The Art of Writing, Volume II - US\$10.00**

This collection covers the Art of Writing articles published during 1998. The book is 62,000 words in length and builds on the foundation of knowledge provided by Volume I of this popular series.

### **15. The Art of Science Fiction, Volume I - US\$10.00**

Have you missed any of the articles in the Art of Science Fiction Series? No problem. The first sixteen articles (October, 1996-December, 1997) have been collected into a book-length work of more than 70,000 words. Learn about science fiction techniques and technologies, including starships, time machines, and rocket propulsion. Tour the Solar System and learn astronomy from the science fiction writer's viewpoint. We don't care where the stars appear in the terrestrial sky. We want to know their true positions in space. If you are planning to write an interstellar romance, brushing up on your astronomy may be just what you need.

#### **16. The Art of Science Fiction, Volume II - US\$10.00**

This collection covers the *Art of Science Fiction* articles published during 1998. The book is 67,000 words in length and builds on the foundation of knowledge provided by Volume I of this popular series.

#### **17. The Astrogator's Handbook – Expanded Edition and Deluxe Editions**

The Astrogator's Handbook has been very popular on Sci Fi – Arizona. The handbook has star maps that show science fiction writers where the stars are located in space rather than where they are located in Earth's sky. Because of the popularity, we are expanding the handbook to show nine times as much space and more than ten times as many stars. The expanded handbook includes the positions of 3500 stars as viewed from Polaris on 63 maps. This handbook is a useful resource for every science fiction writer and will appeal to anyone with an interest in astronomy.