Lesson Six

Cohesion and Coherence

The beginning is half of the whole.
PLATO

That which the fool does in the end the wise man does in the beginning.
R.C. TRENCH

If he would inform, he must advance regularly from Things known to things unknown, distinctly without Confusion, and the lower he begins the better. It is a common Fault in Writers, to allow their Readers too much knowledge: They begin with that which should be the Middle, and skipping backwards and forwards, 'tis impossible for any one but he who is perfect in the Subject before, to understand their Work, and such an one has no Occasion to read it.
BENJAMIN FRANKLIN

"Begin at the beginning," the King said, gravely, "and go on till you come to the end; then stop."
LEWIS CARROLL

LOCAL COHESION AND GLOBAL COHERENCE

So far, we've looked at style as if we wrote individual sentences, independent of context or intention; as if we could map our experience of the world directly onto SUBJECTS and VERBS and thereby make our sentences clearly mirror the way CHARACTERS and ACTIONS behave "out there" in reality.

Now, in fact, when we do match characters to subjects and their actions to verbs, our readers do judge our sentences to be individually clear. But effective writing requires more than local clarity. Readers must also feel that they can move easily from one clear sentence to the next, that each sentence "coheres" with the ones before and after. Readers must also feel that a series of several sentences constituting a unified passage is not just a series of consecutively connected sentences, but a "coherent" whole. Even more than that, though, our readers should feel that the whole has a particular "shape," a shape that encourages them to understand our subject as we want them to. Explaining these experiences is the object of this lesson: What do readers mean when they say a passage not only "flows," but that a flowing passage "hangs together" into a coherent whole? We'll address the questions in that order.

COHESION: A SENSE OF FLOW

Compare these two passages:

1a. The means by which Asian companies have sought to compete with American products in market segments in the Western Pacific region will constitute the objective of the first phase of our study. The labor costs of our Asian competitors and their ability to introduce new products quickly are the main issues to be examined in detail. A plan that will demonstrate how American industry can restructure its operations so that it can better exploit unexpected market opportunities, particularly in the Pacific Rim, will be developed from this study.

1b. In the first phase of our study, we will examine market segments in the Western Pacific region to determine how Asian companies have competed with American products. The study will examine in detail labor costs and the ability of Asian competitors to introduce new products quickly. We will develop from this study a plan that will demonstrate how American industry can restructure its operations so that it can better exploit unexpected market opportunities, particularly in the Pacific Rim.

Most readers feel that (1b) is more readable than (1a), but they describe that response in words different from those they use to describe the nominalized and passive passages in Lessons Three and Four. Instead of calling (1a) "wordy" or "complex" or "impersonal," most readers say it is "disjointed," "unfocused," lacking "flow"; they describe (1b) as "flowing," "coherent," and "focused." This new language of response calls for a different vocabulary of analysis.

Something Old, Something New

In Lesson Four, we devoted a few pages (pp. 70–79) to qualifying that widely repeated advice: "Avoid PASSIVES." In general, choose not the passive verb in (a), but the ACTIVE verb (b):

a. A black hole **is created by** the collapse of a dead star into a point perhaps no larger than a marble.

b. The collapse of a dead star into a point perhaps no larger than a marble **creates** a black hole.

But we also saw that the passive had its uses. One is to duck responsibility, but a more important one is to create flow and cohesion. Consider this context for (a) and (b):

[1]Some astonishing questions about the nature of the universe have been raised by scientists exploring black holes in space.

[2a/b] _____

[3]So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

In that context, try first the passive sentence (a) and then active (b):

[1]Some astonishing questions about the nature of the universe have been raised by scientists exploring black holes in space.
[2a]A black hole is created by the collapse of a dead star into a point perhaps no larger than a marble. [3]So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

[1]Some astonishing questions about the nature of the universe have been raised by scientists exploring black holes in space.
[2b]The collapse of a dead star into a point perhaps no larger than a marble creates a black hole. [3]So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

Our sense of "flow" should tell us that this context calls not for the active verb, but for the passive. And the reason is clear. The last few words of sentence (1) introduce an important character—black holes:

[1]Some astonishing questions about the nature of the universe have been raised by scientists exploring **black holes in space.**

But if the next sentence, (2), is in the active voice, the first concept the reader hits is collapsed stars and marbles, information that seems to come out of nowhere.

[2b]The collapse of a dead star into a point perhaps no larger than a marble creates a **black hole.**

The information that we would recognize, *black hole,* doesn't appear until the end of that sentence.

We could move a reader from sentence (1) to (2) more easily if we began (2) with *a black hole,* something familiar that would let the reader connect the beginning of (2) to the last few words of (1). To make that shift, we can make *black hole* the SUBJECT of a passive verb:

[1]. . . exploring *black holes in space.* [2a]*A black hole* **is created** by the collapse of a dead star into a point perhaps no larger than a marble. [3]So much matter compressed into so little volume changes the fabric of space . . .

Note too that we have now located at the end of sentence (2) words that we can easily recall when we begin sentence (3), thereby making sentences (2) and (3) cohere better:

> [1]exploring black holes in space. [2a]A black hole is created by the collapse of a dead star into **a point perhaps no larger than a marble.** [3]**So much matter compressed into so little volume** changes the fabric of space . . .

To be meaningful, a sentence must include information of two kinds: information that is old and information that is new. In every sentence, there has to be new information, as well as old. Each sentence has to have old and new information. New and old information has to be in each sentence. If you are baffled why I wrote the last three sentences, you should be. You understood them, but they were effectively meaningless because they offered you nothing new. They simply repeated the first sentence.

Functional Sentence Perspective, developed by Prague School linguists in the late 1930s, is the foundational theory for the study of cognitive processing of information expressed in introductory-Theme/completing-Rheme patterns. You were probably baffled by that sentence too, but in a different way: It consists almost entirely of new information; it offers you virtually no familiar information to help you link its new information to anything you've already learned about style. Here is the same new information, but presented so that each sentence opens with concepts that you recognize and only then introduces you to concepts that you do not.

> Those who study how we process the flow of old and new information in sentences base their work on a model of language developed in the 1930s by a group of linguists known as the Prague School, a model today called "Functional Sentence Perspective." In that model, sentences are divided not into subjects and predicates, but into introductory elements that communicate old information (Themes) and completing elements that communicate new information (Rhemes).

You may still find that passage difficult, but for a reason that is unavoidable: As long as you go on reading anything new, you will always have to deal with new words for new concepts. And as long as you go on writing, you will always have to think about the ways that you introduce concepts that may be old to you but are new to your readers.

That sense of continuing old-to-new creates in prose what we call "flow."

Creating that sense of flow is the problem—and the challenge—of English prose: With every sentence, we have to find the best trade-off between the principles that make individual sentences clear and the principles that give sentences that sense of a cohesive flow. *But in that compromise, we always give priority to those features of style that make discourse cohesive, those features that help the reader integrate individual sentences into a unified passage.*

The Principle of Cohesion: Old-to-New

We can now formulate two more principles of writing and revision:

— Begin sentences with ideas that your readers will readily recognize, ideas that you have just mentioned, referred to, or implied, or with concepts that you can assume they know.

Conversely:

— End sentences with information that your readers cannot anticipate or with information that is more difficult to understand: lists, technical words, complex conditions.

Those principles are easier to apply to the writing of others than to our own. In Lesson Three, I explained why (p. 53). We will always be our own worst editors because by the time we write a final draft, everything we write is old—to us. But to our readers, at least some of it must seem new (otherwise why read?). So even though we find it difficult to distinguish old information from new, we have to try, because we have to begin our sentences from our readers' point of view—with what they already know, either from the knowledge they bring to their reading or from the information that we provide in previous sentences.

Exercise 6-1

Revise this passage to improve its flow.

> The Hart Queen is one of the best skis for beginning and intermediate skiers. A thin layer of tempered ash from the hardwood forests of

Kentucky makes up its inner core. Two innovations for strength and flexibility are built into its outer construction. Two sheets of ten-gauge steel reinforce a layer of ash for increased strength. A wrapping of fiberglass surrounds two steel sheets for increased flexibility. Most conventional bindings can be used with the Queen. The Salomon Double is the best binding, however. A cushion of foam and insulation firmly cradles the foot and ankle yet freedom of movement is still permitted.

When you locate your characters in subjects and your actions in verbs, you make your style readable. But try as well to locate old information toward the beginning of your sentences and new information toward the ends. Use your subjects to express topics, and through a series of sentences, do not vary your topics randomly. To the degree that through a series of sentences you can maintain a consistent point of view, to that degree those sentences will constitute a unified passage of prose.

FIXED	Topic	
VARIABLE	Old Information	New Information
FIXED	Subject	Verb
VARIABLE	Characters	Action

1. Open your sentences with what you have already mentioned or with knowledge that you can assume you and your reader share.

> The number of wounded and dead in the Civil War exceeded that in **all the other wars in American history.** One of the reasons for the lingering animosity between North and South today is **the memory of this terrible carnage.**
>
> **Of all the wars in American history,** none has exceeded the Civil War in the number of wounded and dead. **The memory of this terrible carnage** is one of the reasons for the animosity between North and South today.

2. Through a series of sentences that you want your readers to understand as a coherent, focused passage, keep your topics short and reasonably consistent:

> **How Asian companies that have sought to compete with American products in six market segments in the Western Pacific region** will constitute the objective of the first phase of this study. **The labor costs of the Asian competitors and their ability to introduce new products quickly** are the main issues that we will examine in detail in each section. **A plan that will show how American industry can restructure its facilities so that it can better exploit unexpected opportunities, particularly in the Pacific Rim market,** will be developed from this study.
>
> In the first phase of this study, **we** will examine six market segments in the Western Pacific region to determine how **Asian companies** have competed with American products. In each section, **the study** will examine in detail labor costs and their ability to introduce new products quickly. **We** will develop from this study a plan that will show American industry how to restructure its facilities so that **it** can better exploit unexpected opportunities, particularly in the Pacific Rim market.

3. Choose topics that control your reader's point of view. Your success will depend on how you can use verbs to make one or another of your characters a seeming agent. Which of these would better serve the needs of a patient suing a physician is obvious:

> **A patient** whose reactions go unmonitored may claim physician liability. In this case, **a patient** took Cloromax as prescribed, resulting in renal failure. **The manufacturer's literature** indicated that the

patient should be observed and should immediately report any sign of infection.

If **a physician** does not monitor his patient's reactions, **he** may be held liable. In this case, **the physician** prescribed Cloromax, which caused the patient to experience renal failure. **The physician** had been cautioned by the manufacturer's literature that **he** should observe the patient and instruct the patient to report any sign of infection.

THE NUANCES OF EMPHASIS

Technical Terms

Whenever you write technical prose, your audience is likely to include some readers who will not understand all your terminology, so for them you must define your terms. But when you first introduce those terms, you must locate them in the stress of your sentences.

Exercise 7-5

In these next two passages, underline each term that you do not understand. Once you have underlined its first occurrence, don't

underline it again in that passage. As you read the second passage, assume you are reading it for the first time. Then generalize: Where in the passages do the technical terms occur? How does that difference affect how easily you read the two? What other devices did I use to revise the first into the second?

1a. The effects of calcium blockers in the control of cardiac irregularity can be seen through an understanding of the role of calcium in the activation of muscle groups. The regulatory proteins actin, myosin, tropomyosin, and troponin make up the sarcomere, the basic unit of muscle contraction. The thick filament is made up of ATPase, an energy producing protein myosin, while actin, tropomyosin, and troponin make up the thin filament.

1b. When muscles contract, they need calcium. We must therefore understand how calcium influences muscle contraction in order to understand how cardiac irregularity is controlled by drugs called calcium blockers. The basic unit of muscle contraction is the sarcomere. It has two filaments, one thin and one thick, consisting of proteins that regulate contraction. Muscles contract when two of these proteins interact: One is in the thin filament: actin. The other is in the thick filament: it is myosin, an energy producing or ATPase protein.

Both passages have the same technical terms, the same complex information, but for the novice in muscle chemistry, (1b) is more readable than (1a). The versions differ in two ways.

1. I made information that was implicit in (1a) explicit in (1b):

   1a. . . . and troponin make up the sarcomere, the basic unit of muscle contraction. The thick filament is made up of . . .

   1b. The basic unit of muscle contraction is the sarcomere. It has two filaments . . .

I also converted information that was indirectly stated in an adjective in (1a) into direct statements with full subjects and verbs in (1b):

regulatory proteins → proteins that regulate.

2. I also moved technical terms to the ends of their sentences:

   2a. The regulatory proteins actin, myosin, tropomyosin, and troponin make up the **sarcomere,** the basic unit of muscle contraction.

   2b. The basic unit of muscle contraction is **the sarcomere.**

So in addition to everything else we've discussed, here is another key to communicating complex information: When you introduce your audience to a technical term, design the sentence it first appears in so that the term appears at the end of that sentence, in its stress, *never at the beginning, in its topic.* Writers introduce terms in this way in even the most specialized and professional writing. This is from *The New England Journal of Medicine:*

> We previously described [note the first person metadiscourse] a method for generating lymphocytes with antitumor reactivity. The incubation of peripheral-blood lymphocytes with a lymphokine, interleukin-2, generates lymphoid cells that can lyse fresh, noncultured, natural-killer-cellresistant tumor cells but not normal cells. *We term these cells* [more first person metadiscourse that moves the technical term to the stress] **lymphokine-activated killer (LAK) cells.**

Traci Nagle
1996

STYLE

Ten Lessons in Clarity & Grace

Fourth Edition

Joseph M. Williams
The University of Chicago

HarperCollins*CollegePublishers*

Senior Acquisitions Editor: Jane Kinney
Developmental Editor: Marisa L. L'Heureux
Project Coordination and Cover Design: Tage Publishing Service, Inc.
Production Administrator: Hilda Koparanian

Printer and Binder: R. R. Donnelley & Sons Company
Cover Printer: R. R. Donnelley & Sons Company

Style: Ten Lessons in Clarity & Grace, Fourth Edition

Library of Congress Cataloging-in-Publication Data

Williams, Joseph M.
Style : ten lessons in clarity and grace / Joseph M. Williams.—
4th ed.
p. cm.
Includes index.
ISBN 0-673-46593-4
1. English language—Rhetoric. 2. English language—Technical English. 3. English language—Business English. 4. English language—Style. I. Title.
PE1421.W545 1994
808'.042—dc20 93-30211
CIP

95 96 9 8 7 6 5 4 3