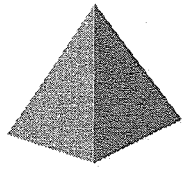
'There is nothing so useful as a good theory.'

KURT LEWIN



THE PYRAMID PRINCIPLE

LOGIC IN WRITING AND THINKING

Barbara Minto

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ABOUT THE AUTHOR

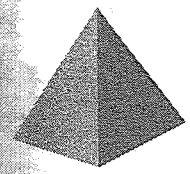
Barbara Minto grew up in Cleveland, Ohio. She began her career on the staff of Cyrus Eaton, the industrialist who founded the famous Pugwash Conferences of nuclear scientists. Working as part of the team that organized and ran the conferences, she received sound training in tackling the problems of communicating clearly on technical subjects.

In 1961 she left Mr. Eaton to attend the Harvard Business School, returning to Cleveland in 1963 to join McKinsey & Company, the international management consulting firm, as their first female consultant. Her ability to write was noted, and she was transferred to London in 1966, to concentrate on developing the writing skills of their growing European staff. All reports at that time were written in English, and it was thought that consultants not writing in their first language would experience special difficulties.

However, it became apparent to her very quickly that the writing difficulties in Düsseldorf and Paris were the same as those in New York and Cleveland. The problem was not so much to get the language right as to get the thinking clear. This insight led her to concentrate on discovering the structures of thinking that must underlie clear writing, and eventually to develop the ideas that make up this book.

She still lives in London, but has since 1973 run her own firm, Minto International, Inc. She specializes in teaching The Pyramid Principle to people whose major training is in business or the professions, but whose jobs nevertheless require them to produce complex reports, analyses, memorandums, or presentations.

She has taught her course to most of the major consulting firms in the United States and Europe, as well as to many of the country's largest corporations. She has also lectured at the Harvard, Stanford, Chicago, and London business schools, and at the State University of New York.



PREFACE

This book proposes to tell you how to use The Pyramid Principle to write a clear business document. Writing anything clearly consists of two steps: first, decide the point you want to make, then put it into words. So long as you know the point, you rarely have a problem stating it:

- Please leave two quarts today.
- I'll meet you at 12:30 at Mario's.
- Call your wife.

But you can run into trouble when you have to sort through a series of points to come to an overall conclusion:

> John Collins telephoned to say that he can't make the meeting at 3:00. Hal Johnson says he doesn't mind making it later, or even tomorrow, but not before 10:30, and Don Clifford's secretary says that Clifford won't return from Frankfurt until tomorrow, late.

> The Conference Room is booked tomorrow, but free Thursday. Thursday at 11:00 looks to be a good time. Is that OK for you?

What the author has done here is what most people do when they write. He has used the writing process as a device to formulate his thinking. As a *device* it works quite well, in fact, but the result is a bit hard on the reader, who is forced to plow through several irrelevant sentences before he finds the point. How much easier if the note had read:

> Could we reschedule today's meeting to Thursday at 11:00? This would be more convenient for Collins and Johnson, and would also permit Clifford to be present.

Alas, to get from the first example to the second means double work for both the author and his secretary, and most people feel it is not really worth the effort for such a short note. No doubt they're right. But what happens when, instead of the document's being one paragraph long, it is two or three pages? Usually the author feels it would take too long to revise it, and in any case he's often not sure just how to go about doing the revision. Much easier, he decides, to leave it to the reader to sort through the points and pull out the message for himself.

Until recently few readers actually complained about this attitude on the part of their correspondents. Most took it for granted that this was how business writing was supposed to look, since it resembled what they themselves had learned to produce by careful copying of their superiors. Indeed, I can recall once telling a consultant that his 2-hour presentation on a company's new organization structure was boring. He replied:

> *'What you don't realize is that people come expecting it to be boring. They're used to it.'*

Perhaps. But the time wasted is enormous, and continual exposure to badly written, boring documents can only be soul destroying. As one commentator sympathetically noted, 'The myth that

businessmen don't read is nonsense. They read a lot. But what they read is illiterate.'

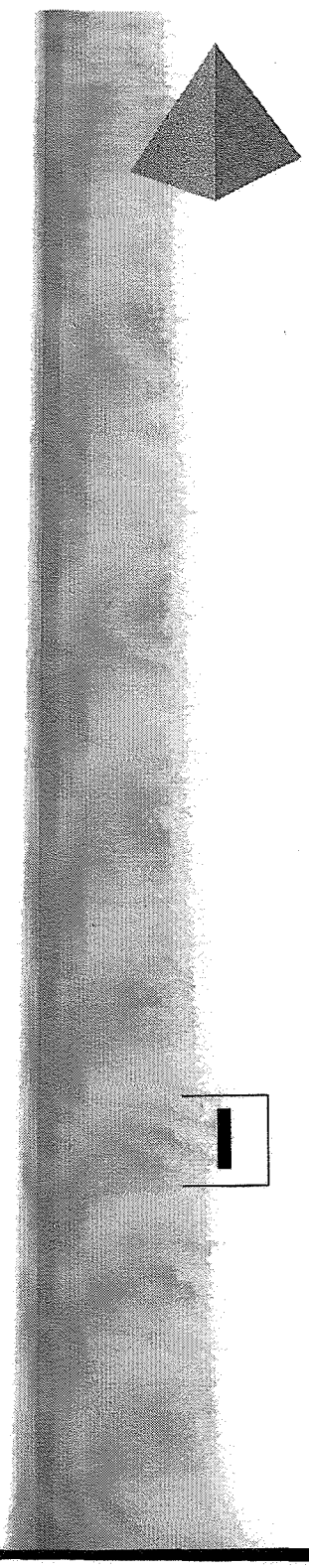
For the average business or professional writer, producing more literate memos and reports does not mean writing shorter sentences or choosing better words. Rather, it means formally separating the thinking process from the writing process, so that you can complete your thinking *before* you begin to write. And that's what this book will tell you how to do.

Essentially it will tell you that it is the order in which you present your thinking that makes your writing clear or unclear, and that you cause confusion in the reader's mind when you do not impose the proper order. Imposing the proper order means creating a comprehensive structure that identifies the major ideas and their flow, and organizes the minor ideas to support them.

The key skill, then, is to be able to recognize which are your major and which your minor ideas, and to work out their relationships within the structure. The demands of logic and the limitations of a reader's ability to take in information dictate that this structure will always be pyramidal in shape – hence The Pyramid Principle.

Part One will both explain this principle and show you how to use it to build a beginning pyramid. Part Two will show you how to use your knowledge of the pyramid rules to look critically at this structure, find its logical flaws, and push your thinking creatively so that you end up saying precisely what you mean.

The approach is applicable to any document in which your purpose is to get your thinking across clearly. Applying it, however, requires considerable discipline. Nevertheless, by deliberately forcing yourself to think first and write later in the manner it suggests, you should be able quite dramatically (a) to cut down the time you normally need to produce a final draft, (b) to increase its clarity, and (c) to decrease its length.



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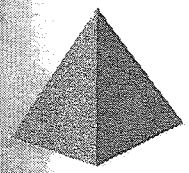
PART I

THE PYRAMID PRINCIPLE

LOGIC IN WRITING



INTRODUCTION TO PART I

One of the least pleasant aspects of a professional person's job is the need to put things in writing. Almost everyone finds it a chore and wishes he were better at it. And many people are told specifically that they need to improve if they want to progress.

The reason most people don't improve is that they assume that writing more clearly means writing simpler, more direct sentences. And it is true that the sentences in their documents are often overlong and unwieldy. Moreover, their language is frequently too technical or too abstract, and their paragraphs on occasion are awkwardly developed.

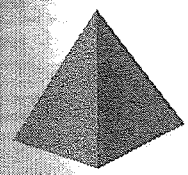
But these are weaknesses of *style*, and it is notoriously difficult for a person who has completed the formal part of his education to change his writing style. Not that it cannot be done; rather, it's like learning to type. It requires a good many repetitive exercises, for which most on-the-job writers in industry and government simply cannot find the time. As a result, they continue to be told they need to write 'more clearly.'

However, there is a second cause of unclear writing, far more pervasive than the first, and much easier to correct. This relates to the *structure* of the document – the order in which the sentences appear regardless of whether they are well or poorly written. If a person's writing is unclear, it is most likely because the ordering of the ideas conflicts with the capability of the reader's mind to process them.

This capability is the same for everyone, whether reader or writer, so that learning to accommodate it is a relatively easy task. And invariably, the writer who forces himself to match the structure of his writing to that of his reader's mind also finds that he has clarified his own thinking sufficiently to write less awkward sentences.

This first section of the book explains why the structure in a reader's mind will always be a pyramid, and what the logical

substructures are that make up that pyramid. It tells you how to use this knowledge to identify the ideas you need to include in a particular document, and to structure a clear relationship between them. Finally, it tells you how to highlight your structure so that the ideas and their relationships will be easy to see at a glance.



1

WHY A PYRAMID STRUCTURE

The person who seeks to learn what you think about a particular subject by reading what you have to say about it faces a complex task. Even if your document is a short one – say only about 2 single-spaced pages – it will contain roughly 100 sentences. He must take in each of these, digest them, relate them, and hold them together. He will invariably find the job easier if they come to him as a pyramid, beginning at the top and working downward. This conclusion reflects some fundamental findings about the way the mind works. Specifically:

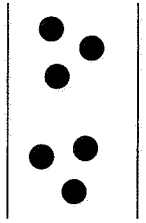
- The mind automatically sorts information into distinctive pyramidal groupings in order to comprehend it.
- Any grouping of ideas is easier to comprehend if it arrives presorted into its pyramid.
- This suggests that every written document should be deliberately structured to form a pyramid of ideas.

The sections following explain what I mean by a pyramid of ideas.

SORTING INTO PYRAMIDS

That the mind automatically imposes order on everything around it has long been recognized. Essentially, it tends to see any sequence of things that occur together as belonging together, and therefore sets about imposing a logical pattern on them. The Greeks, for example, demonstrated the tendency by looking up at the stars and seeing outlines of figures instead of pinpoints of light.

The mind will group together any series of items that it sees as having a 'common fate' – because they share similar characteristics or are near the same place. Take these six dots for example:



When looking casually at them, everyone sees two groups of three dots each, primarily because some of the distances between the dots are smaller than others.

The value of seeing things in logical units is, of course, immense. To demonstrate, read the following pairs of nouns,* which are normally not related to each other.

LAKE	■	SUGAR
BOOT	■	PLATE
GIRL	■	KANGAROO
PENCIL	■	GASOLINE
PALACE	■	BICYCLE
RAILROAD	■	ELEPHANT
BOOK	■	TOOTHPASTE

* Based on a series given in *Gestalt Psychology* by Wolfgang Kohler (Liveright Publishing: New York) 1970.

Now try to 'organize' them by picturing a situation in which each one might be associated – such as the sugar being dissolved in the lake or the boot sitting on the plate. Then cover up the list on the right-hand side and try to remember them through reading the list on the left-hand side. Most people find that they can recall them all without hesitation.

The same organizing phenomenon takes place when you are either listening to or reading ideas. You assume the ideas that appear together, one after the other, belong together, and attempt to impose a logical pattern on them. The pattern will always be that of a pyramid because this is the only form that meets your mind's need to

- Stop at the magical number seven
- State the logic of the relationship.

The Magical Number Seven

There is a limit to the number of ideas you can comprehend at any one time. For example, think of deciding to leave your warm, comfortable living room to buy a package of cigarettes. 'I think I'll go out and get some cigarettes,' you say to your wife, 'Is there anything you want while I'm out?'

'Gosh. I have such a taste for grapes after all those ads on television,' she says as you walk toward the closet to get your coat, 'and maybe you ought to get some more milk.' You take your coat from the closet as she walks into the kitchen.

'Let me look in the cupboard to see if we have enough potatoes and, oh yes, I know we're out of eggs. Let me see, yes, we do need potatoes.' You put on your coat and walk toward the door.

'Carrots,' she calls out, 'and maybe some oranges.' You open the door. 'Butter.' You walk down the stairs. 'Apples.' You get into the car. 'And sour cream.' 'Is that all?' 'Yes, dear, thank you.'

Now, without reading the passage over, can you remember any of the nine items your wife asked you to buy? Most men come back with the cigarettes and the grapes.

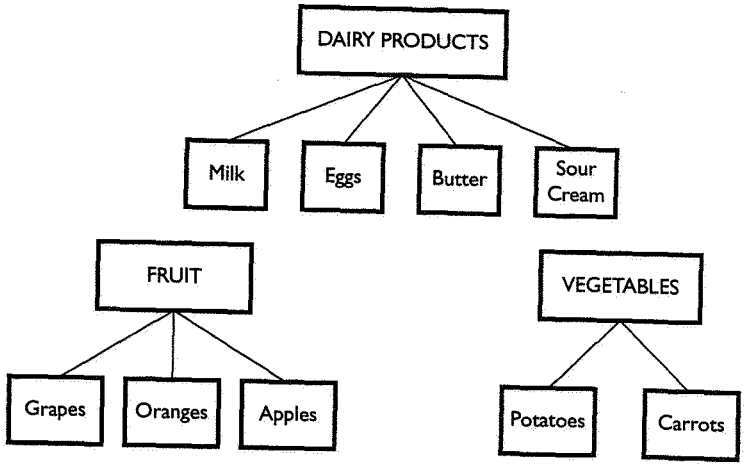
The major problem is that you've run into the magic number seven. This is a phrase coined by George A. Miller in his treatise, 'The Magical Number Seven, Plus or Minus Two.'* What he points out is that the mind cannot hold more than about seven items in its short-term memory at any one time. Some minds can hold as many as nine items, while others can hold only five (I'm a five myself). A convenient number is three, but of course the easiest number is one.

What this means is that when the mind sees the number of items with which it is being presented begin to rise above four or five, it starts to group them into logical categories so that they can be retained. In this case, it would probably put the items into categories that reflect the sections of the supermarket you would need to visit.

To demonstrate how this helps, read the list below and categorize each idea in this way as you come to it. You will very likely find that you remember them all.

GRAPES	ORANGES
MILK	BUTTER
POTATOES	APPLES
EGGS	SOUR CREAM
CARROTS	

If you try to visualize this process, you will see that you have created a set of pyramids of logically related items.



*Miller, George A. *The Psychology of Communication: Seven Essays* (Basic Books: Pa.) 1967.

The Need to State the Logic

Now clearly, it is not enough simply to group the ideas in a logical way without also stating to yourself what the logic of the relationship is. The point in grouping was not just to move from a set of nine items to separate sets of four, two, and three items. That still comes to nine. What you want to do is move *above* the nine, to three.

This means that instead of remembering each of the nine items, you remember only the three categories into which they fall. You are thinking one level of abstraction higher, but because the thought is at a higher level, it suggests the items below it. And, because the relationship is not a contrived one as was the case in the exercise about the lake and the sugar, it is much easier to keep in mind.

All mental processes (e.g., thinking, remembering, problem solving) apparently utilize this grouping and summarizing process, so that the information in a person's mind might be thought of as being organized into one giant conglomeration of related pyramids. If you think about communicating to that mind, you can see that the problem is one of ensuring that what you say will fit somewhere into the existing pyramids.

Now we come to the real problem of communicating. You can 'see' these groupings of items quite clearly. To communicate them means to ensure that the other person 'sees' them in the same way. But, as was the case with your wife, you can only present them one by one. Surely, the most efficient way to do this would be to present the category first and then the items. That is, to order the ideas from the top down.

ORDERING FROM THE TOP DOWN

Controlling the sequence in which you present your ideas is the single most important act necessary to clear writing. The clearest sequence is always to give the summarizing idea before you give the individual ideas being summarized. I cannot emphasize this point too much.

Remember that the reader (or listener) can only take the sentences in one at a time. You know he will assume that those ideas

that appear together logically belong together. If you do not tell him in advance what the relationship is, but simply give the ideas one at a time, he will automatically look for similarities by which he can group the points being expressed, so that he can explain to himself the significance of the groupings.

Alas, people being as diverse in background and understanding as they are, they rarely put exactly the same interpretation on your groupings as you do. Indeed, they not infrequently find that they can't see any relationship at all between the ideas in a set. Even if they think exactly as you do, you are making their reading more difficult, since they must supply what is unstated.

Let me demonstrate how confusing any order other than top down is with an example. Suppose I join you to have a beer in the pub, and apropos of nothing in particular, say:

> I was in Zurich last week – you know what a conservative city Zurich is – and we went out to lunch at an outdoor restaurant. Do you know that within 15 minutes I must have seen 15 people with either a beard or a moustache.

Now, I have given you a piece of information, and without realizing it you will automatically make some assumptions about the reason for my giving you that information. In other words, you will see this statement as part of a group of ideas not yet expressed, and prepare your mind to receive the rest by assuming a probable purpose behind the statement. This expectancy reduces the strain of analyzing each succeeding idea for all its attributes; you look only for the one in common with what has gone before.

Thus, you might think such things as, 'She's talking about how unconservative Zurich is getting,' or 'She's going to compare Zurich with other cities,' or even, 'She's hung up on beards and moustaches.' Regardless of what reaction you have, the point is that your mind is waiting for further information on one of those same subjects, whatever it turns out to be. Seeing that blank look on your face, I then go on to say:

> And you know, if you walk around any New York office you can rarely find even one person who doesn't have sideburns or a moustache.

Now what am I getting at? I seem to be comparing not cities as such, but cities in which we have offices; and instead of just beards and moustaches I seem to be including all manner of facial hair. 'Probably,' you're thinking, 'she disapproves of the new style. Or maybe she's going to compare the styles in various offices. Or maybe she's surprised at the amount tolerated in the consulting profession.' In any case, you mutter something noncommittal in reply, and thus encouraged I go on to state:

> And of course facial hair has been a part of the London scene for at least 10 years.

'Ah,' you think, 'at last I see what she's getting at. She's trying to make the point that London is ahead of all the other cities,' and you tell me so. Perfectly logical, but it's wrong; that's not what I was getting at at all. In fact, what I was getting at was this:

> You know it's incredible to me the degree to which facial hair has become such an accepted part of business life.
>
> In Zurich . . .
>
> In New York . . .
>
> And of course in London . . .

See how much more easily you can comprehend the group of ideas in the way I mean you to once the framework within which to judge the relationship between them has been given to you? In a manner outside anyone's control, the reader is going to look for a structure connecting the ideas as they come to him. To make sure he finds the one you intended, you must tell him in advance what it is – to make sure he knows what to look for. Otherwise he is likely either to see an unintended relationship, or worse, none at all, in which case you have both wasted your time.

As an example of this latter situation, look at the main points of the opening paragraphs of an article on equal pay for women:

> Granted equal pay, women could finish off worse than before – i.e., there could be a wider rather than narrower gap between average earnings of women and men than today

- Equal pay means equal pay for the same job or equal pay for equal value of work (to the employer).
- Applying either interpretation means either
  Compelling employers to act in their own self-interest, or
  Ending restrictive practices by male workers.

Here you are given five ideas between which the connecting relationship is unclear, despite the fact that the author has 'started at the top,' as he sees it. Can you not feel your mind scrabbling about trying to find a relationship, coming to the conclusion that there is none, and giving up in disgust? The mental strain is simply too great.

You must recognize that a reader, no matter how intelligent he is, has only a limited amount of mental energy available to him. Some of it will be used up just recognizing and interpreting the words, a further amount seeing the relationships between the ideas, and whatever is left comprehending their significance.

You can economize his need to spend time on the first two activities by presenting the ideas so that they can be comprehended with the least possible mental effort. To sequence them instead so that the mind has to go backward and forward to make connections is simply bad manners, and most readers react by refusing to do so.

To summarize, a reader remembers from the top down as a matter of course. He also comprehends more readily if ideas are presented from the top down. All of this suggests that the clearest written documents will be those that consistently present their information from the top down, in a pyramidal structure.

THINKING FROM THE BOTTOM UP

If you are going to group and summarize all your information and present it in a top-down manner, it would seem your document would have to look something like the structure in Exhibit 1. The boxes stand for the individual ideas you want to present, with your thinking having begun at the lowest level by

forming sentences that you grouped logically into paragraphs. You then grouped the paragraphs into sections, and the sections into the total memorandum represented by a single thought at the top.

If you think for a moment about what you actually do when you write, you can see that you develop your major ideas by thinking in this bottom-up manner. At the very lowest level in the pyramid, you group together your sentences, each containing an individual idea, into paragraphs. Let us suppose you bring together six sentences into one paragraph. The reason you bring together those six sentences and no others will clearly be that you see a logical relationship between them. And that logical relationship will always be that they are all needed to express the single idea of the paragraph, which is effectively a summary of them. You would not, for example, bring together five sentences on finance and one on tennis, because their relevance to each other would be difficult to express in a single summary sentence.

Stating this summary sentence moves you up one level of abstraction and allows you to think of the paragraph as containing one point rather than six. With this act of efficiency you now group together, say, three paragraphs, each containing a single thought at a level of abstraction one step higher than that of the individual sentences. The reason you form a section out of these three paragraphs and no others is that you see a logical relationship between them. And the relationship is once again that they are all needed to express the single idea of the section, which again will be a summary of the three ideas in the paragraphs below them.

Exactly the same thinking holds true in bringing the sections together to form the document. You have three sections grouped together (each of which has been built up from groups of paragraphs, which in turn have been built up from groups of sentences) because they are all needed to express the single idea of the memorandum, which in turn is a summary of them.

Since you will continue grouping and summarizing until you have no more relationships to make, it is clear that every document you write will always be structured to support only one single thought – the one that summarizes your final set of groupings. This should be the major point you want to make, and all the ideas grouped

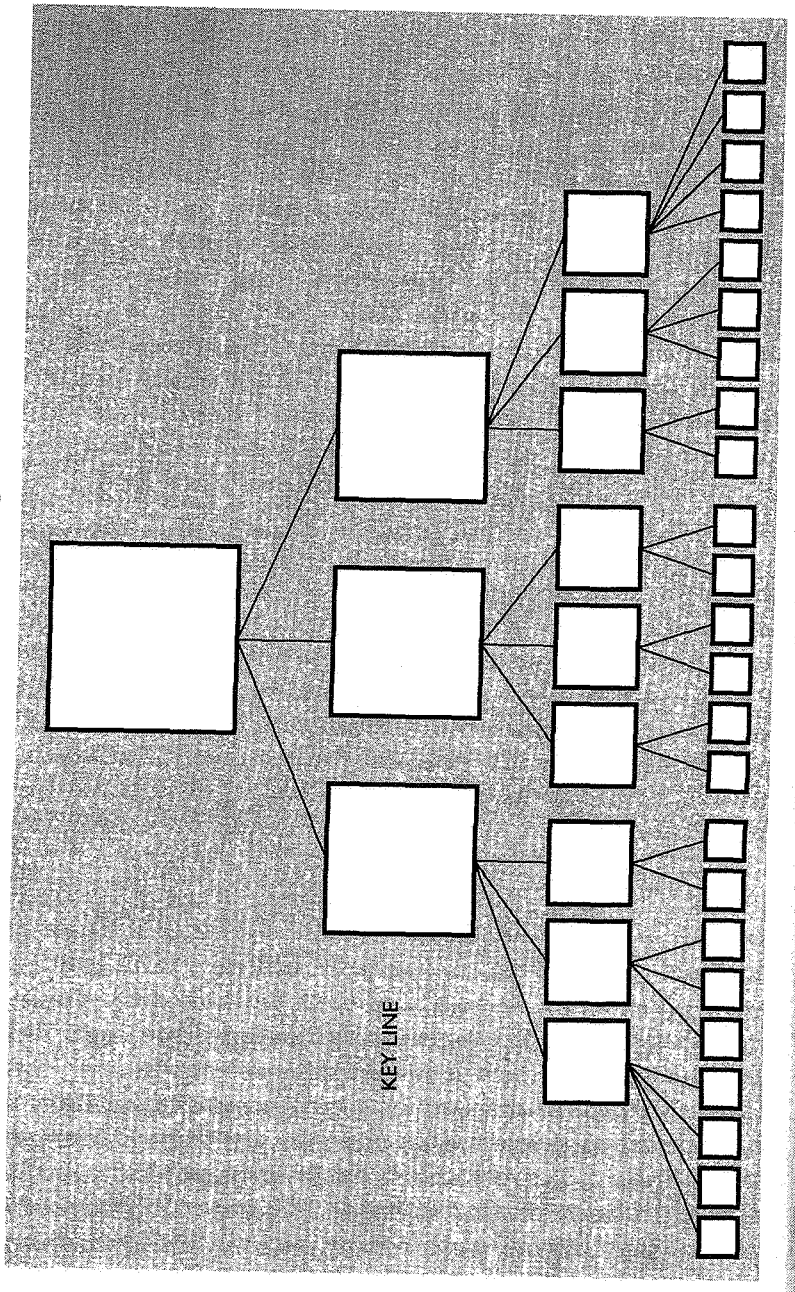


Exhibit I Ideas in writing should always form a pyramid under a single thought

underneath – provided you have built the structure properly – will serve to explain or defend that point in ever greater detail.

Fortunately, you can define in advance whether or not you have built the structure properly by checking to see whether your ideas relate to each other in a way that would permit them to form pyramidal groups. Specifically, they must obey three rules:

1 Ideas at any level in the pyramid must always be summaries of the ideas grouped below them.

2 Ideas in each grouping must always be the same kind of idea.

3 Ideas in each grouping must always be logically ordered.

Let me explain why these rules 'must always' apply:

1 *Ideas at any level in the pyramid must always be summaries of the ideas grouped below them.* The first rule reflects the fact that the major activity you carry out in thinking and writing is that of abstracting to create a new idea out of the ideas grouped below. As we saw above, the point of a paragraph is a summary of its sentences, just as the point of a section is a summary of the points of its paragraphs, etc. However, if you are going to be able to draw a point out of the grouped sentences or paragraphs, these groupings must have been properly formed in the first place. That's where rules 2 and 3 come in.

2 *Ideas in each grouping must always be the same kind of idea.* If what you want to do is raise your thinking only one level of abstraction above a grouping of ideas, then the ideas in the grouping must be logically the same. For example, you can logically categorize apples and pears one level up as fruits; you can similarly think of tables and chairs as furniture. But what if you wanted to group together apples and chairs? You cannot do so at the very next level of abstraction, since that is already taken by fruit and furniture. Thus, you would have to move to a much higher level and call them 'things' or 'inanimate objects,' either of which is far too broad to indicate the logic of the grouping.

In writing you want to state the idea directly implied by the logic of the grouping, so the ideas in the grouping must all fall into the same logical category. Thus, if the first idea in a grouping

is a reason for doing something, the other ideas in the same grouping must also be reasons for doing the same thing. If the first idea is a step in a process, the rest of the ideas in the grouping must also be steps in the same process. If the first idea is a problem in the company, the others in the grouping must be related problems, and so on.

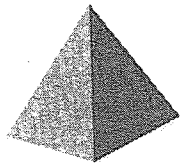
A shortcut in checking your groupings is to be sure that you can clearly label the ideas with a plural noun. Thus, you will find that all the ideas in the grouping will turn out to be things like recommendations, or reasons, or problems, or changes to be made. There is no limitation on the kinds of ideas that may be grouped, but the ideas in each grouping must be of the same kind, able to be described by one plural noun. How you make sure you get like kinds of ideas grouped together each time is explained more fully in Part Two, Chapters 7, 8, and 9.

3 *Ideas in each grouping must always be logically ordered.* That is, there must be a specific reason why the second idea comes second, and cannot come first or third. How you determine proper order is explained in detail in Chapter 7, *Questioning the Order of the Ideas.* Essentially it says that there are only four possible logical ways in which to order a set of ideas:

- Deductively (major premise, minor premise, conclusion)
- Chronologically (first, second, third)
- Structurally (Boston, New York, Washington)
- Comparatively (first most important, second most important, etc.)

The order you choose reflects the analytical process you used to form the grouping. If it was formed by reasoning deductively, the ideas go in argument order; if by working out cause-and-effect relationships, in time order; if by commenting on an existing structure, the order dictated by the structure; and if by categorizing, order of importance. Since these four activities – reasoning deductively, working out cause-and-effect relationships, dividing a whole into its parts, and categorizing – are the only analytical activities the mind can perform, these are the only orders it can impose.

Essentially, then, the key to clear writing is to slot your ideas into this pyramidal form and test them against the rules before you begin to write. If any of the rules is broken, it is an indication that there is a flaw in your thinking, or that the ideas have not been fully developed, or that they are not related in a way that will make their message instantly clear to the reader. You can then work on refining them until they do obey the rules, thus eliminating the need for vast amounts of rewriting later on.



2

THE SUBSTRUCTURES WITHIN THE PYRAMID

As Chapter 1 explained, a clear piece of writing establishes a rigid set of relationships between its ideas, so that they will form a comprehensive pyramidal structure (see Exhibit 1). It then presents the ideas to the reader, starting at the top and working down each leg.

Because of the specificity of the pyramid rules, if you know what your ideas are before you begin to write, you can relatively easily form them into a proper pyramid. Most people when they sit down to write, however, have only a hazy notion of their ideas (if that). Nor should they expect much more. No one can know precisely what he thinks until he has been forced to symbolize it – either by saying it out loud or by writing it down – and even then the first statement of the idea is likely to be less precise than he can eventually make it.

Consequently, you cannot hope just to sit down and start arranging your ideas into a pyramid. You have to discover them first.

But the pyramid dictates a rigid set of substructures that can serve to speed the discovery process. These are:

- The vertical relationship between points and subpoints
- The horizontal relationship within a set of subpoints
- The narrative flow of the introduction

Let me explain the exact nature of these relationships and then, in Chapter 3, tell you how to use them to discover, sort, and arrange your ideas so that they will be clear, first to yourself and then to your reader.

THE VERTICAL RELATIONSHIP

Some of the most obvious facts in the world take years to work their way into people's minds. A good example is what happens when you read. Normal prose is written one-dimensionally, in that it presents one sentence after another, more or less vertically down the page. But that vertical follow-on obscures the fact that the ideas occur at various levels of abstraction. Any idea below the main point will always have both a vertical and a horizontal relationship to the other ideas in the document.

The vertical relationship serves marvelously to help capture the reader's attention. It permits you to set up a question/answer dialogue that will pull him with great interest through your reasoning. Why can we be so sure the reader will be interested? Because he will be forced to respond logically to your ideas.

What you put into each box in the pyramid structure is an idea. I define an idea as a statement that raises a question in the reader's mind because you are telling him something he does not know. (Since people do not generally read to find out what they already know, it is fair to state that your primary purpose in writing any document will always be to tell people what they do not know.)

Making a statement to a reader that tells him something he does not know will automatically raise a logical question in his mind – for example, Why? or How? or Why do you say that? The writer is now obliged to answer that question horizontally on the line below. In his

answer, however, he will still be telling the reader things he does not know, so he will raise further questions that must again be answered on the line below.

The writer will continue to write, raising and answering questions, until he reaches a point at which he judges the reader will have no more logical questions. (The reader will not necessarily agree with the writer's reasoning when he's reached this point, but he will have followed it clearly, which is the best any writer can hope for.) The writer is now free to leave the first leg of the pyramid and go back up to the Key Line to answer the original question raised by the point in the top box.

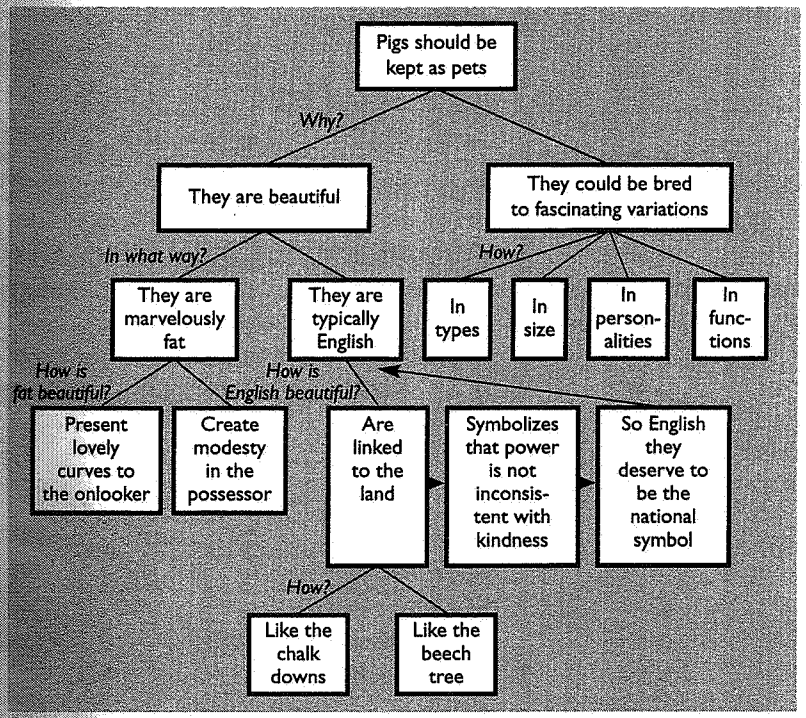
The way to ensure total reader attention, therefore, is to refrain from raising any questions in the reader's mind before you are ready to answer them. Or from answering questions before you have raised them. For example, any time a document presents a section captioned 'Our Assumptions' before it gives the major points, you can be sure the writer is answering questions the reader could not possibly have had an opportunity to raise. Consequently, the information will have to be repeated (or reread) at the relevant point in the dialogue.

The pyramid structure almost magically forces you to present information only as the reader needs it. Let me take you through a couple of examples. Exhibit 2, the first one, is a humorous one, from an article by G. K. Chesterton. It will give you an idea of how the question/answer technique works to hold the reader's attention without burdening you with the need to think about the relevance of the content.

Chesterton says that pigs should be kept as pets, the reader asks Why? Chesterton says, 'For two reasons: First, they are extremely beautiful, and second, they could be bred to fascinating variations.'

Reader: Since when are pigs beautiful?
Chesterton: They're beautiful because they're marvelously fat and they're typically English.

Exhibit 2 The pyramid structure establishes a question/answer dialogue



Reader: What's beautiful about being fat?
Chesterton: It presents lovely curves to the onlooker and it creates modesty in the possessor.

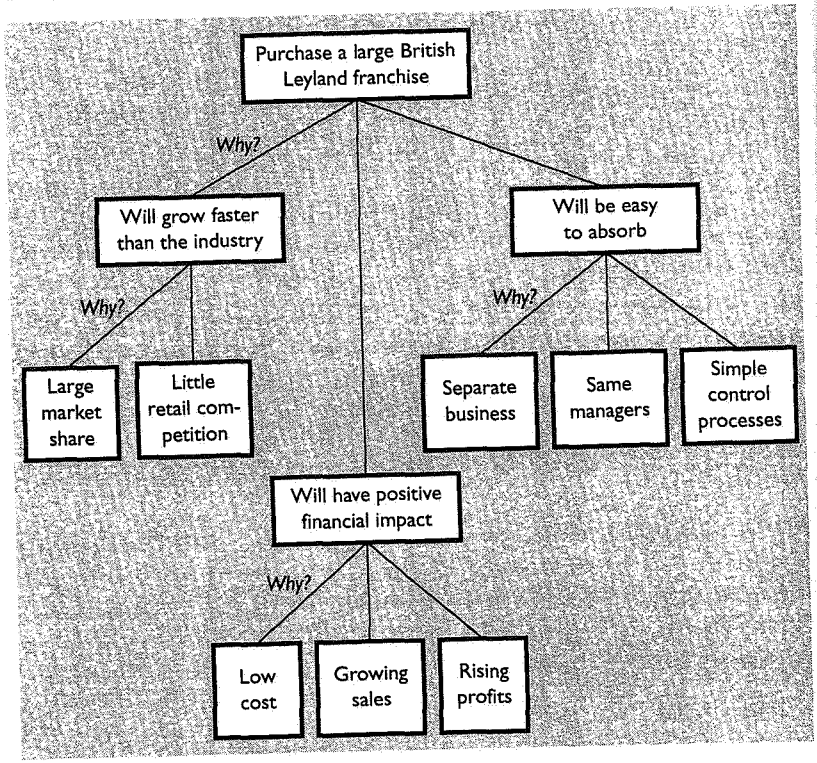
Now at this point, while you clearly do not agree with Chesterton's argument, you can at least see what it is. It is clear to you why he says what he says, and there are no more questions in your mind. Consequently, he can move on to the next leg of his argument – that pigs are beautiful because they are typically English.

Reader: Why is typically English beautiful?
Chesterton: Pigs are linked to the land; this link symbolizes that power is not inconsistent with kindness; that attitude is so English and so beautiful that they deserve to be the national symbol.

Again, you may have a certain prejudice against the sentiment, but it is clear to you why he says what he says. And it is clear because the grouping of ideas sticks to doing its job of answering the question raised by the point above. The last section, about variations, enters the mind equally clearly.

You can see this same technique at work in a piece of business writing (Exhibit 3). Here we have the structure of a 20-page

Exhibit 3 All documents should reflect the question/answer dialogue



memorandum recommending the purchase of a British Leyland franchise (several years ago, obviously). It is a good buy for three reasons, and underneath each reason is the answer to the further question raised in the reader's mind by making this point. The reasoning is so clearly stated that the reader is in a position to determine whether he disagrees with the writer's reasoning, and to raise logical questions concerning it.

To summarize, then, a great value of the pyramid structure is that it forces visual recognition of this vertical relationship on you as you work out your thinking. Any point you make must raise a question in the reader's mind, which you must answer horizontally on the line below.

THE HORIZONTAL RELATIONSHIP

In deciding what to say on the line below, not only must the points you include answer the question raised by the point above, they must also answer it logically. That is, they must present a clear inductive or deductive argument, one or the other, but not both at once. These are the only two types of logical relationships possible in a grouping.

A deductive grouping presents an argument in successive steps. That is, the first idea makes a statement about a situation that exists in the world today. The second idea comments on the subject or the predicate of that statement, and the third idea states the implication of those two situations existing in the world at the same time. Thus, the grouping would have the following form:

- Men are mortal.
- Socrates is a man.
- Therefore Socrates is mortal.

To move up a level of abstraction from a deductive grouping, you summarize the argument, with your summary resting heavily on the final point: 'Because Socrates is a man he is mortal.'

An inductive grouping, by contrast, will take a set of ideas that are related simply by virtue of the fact that you can describe them all by the same plural noun (reasons for, reasons against, steps, problems, etc.). The form of this argument would be:

- French tanks are at the Polish border.
- German tanks are at the Polish border.
- Russian tanks are at the Polish border.

To move upward here, you draw an inference based on your assessment of what is the same about the points – i.e., they are all warlike movements against Poland. Thus, your inference would be something like 'Poland is about to be invaded by tanks.'

In writing, if your answer is deductive you know you must have an argument in which the second point comments on the subject or predicate of the first, and the third point draws a 'therefore' from the previous two. If it is inductive, you know the ideas in the grouping must be logically alike and can be designated by a plural noun.

Given this knowledge, you can see that any one idea in the pyramid implies all the others. Consequently, you could start to build your pyramid anywhere, with a single idea, adding the other ideas as they were demanded – either up or down or sideways. But there is one more thing you need to know before you venture off to build a pyramid of your own. And that is the question to which your document must give the answer. You determine that by tracing the narrative flow of the introduction.

THE INTRODUCTORY FLOW

We saw earlier that the pyramid structure permits you to carry on a question/answer dialogue with your reader. This question/answer dialogue cannot be counted on to engage his interest unless the statement that starts it off is relevant to him. The only way you can be confident of its relevance is to make sure that it directly answers a question you have identified as already existing in his mind.

I said earlier that you write primarily to tell people what they don't know. But a reader wants to find out what he doesn't know

only if he needs to do so. If he has no need, he will have no question, and vice versa.

Thus, you make sure your document is of interest by directing it toward answering a question that already exists in the reader's mind, or that would exist if he thought for a minute about what is going on around him. The introduction identifies that question by tracing the history of its origin.

Since this history will be in the form of a narrative of events, it should follow the classic narrative pattern of development. That is, it should begin by establishing for the reader the time and place of a Situation. In that Situation something will have occurred (known as the Complication) that caused him to raise (or would cause him to raise) the Question to which your document will give him the Answer.

This classic pattern of story-telling – Situation, Complication, Question, Answer – permits you to make sure that you and the reader are 'standing in the same place' before you take him by the hand and lead him through your thinking. It also gives you a clear focus for the point at the top of your document, and thus a means of judging that you are conveying the right message in the most direct way.

To illustrate, here is an introduction of the kind normally seen in business:

> The purpose of this memorandum is to pull together some ideas for further reflection and discussion in such questions as:
>
> 1. Composition of the Board and its optimum size
> 2. A conception of the broad roles of the Board and the Executive Committee, the specific responsibilities of each, and the relationships of one to the other
> 3. Making the outside Board member an effective participant
> 4. Some principles dealing with the selection of Board members and their tenure
> 5. Alternate ways for the company to get from where it is to where it wants to be in Board and Executive Committee operations.

Note how much more easily you comprehend its purpose and message when it is forced to fit the narrative mold:

The new organization installed in October places full authority and responsibility for running the day-to-day activities of the two divisions squarely on the shoulders of the managers of those divisions. This move frees the Board to deal entirely with the broad matters of policy and planning that are its exclusive responsibility.

However, the Board has for so long oriented itself to dealing with short-term operating problems that it is not presently in a position to focus its attention on long-range strategy development. Consequently, it must consider the changes needed to permit itself to do so. Specifically, we believe it should:

- Relinquish responsibility for day-to-day operating matters to the Executive Committee
- Broaden its composition to include outside members
- Establish policies and procedures to formalize internal operation.

In summary, the introduction tells the reader, in story form, what he already knows or could reasonably be expected to know about the subject you are discussing, and thus reminds him of the question he has to which he can expect the document to give him an answer. The story sets forth the Situation within which a Complication developed that raised the Question to which your document will now give the Answer. Once you state the Answer (the main point at the top of your pyramid), it will raise a new question in the reader's mind that you will answer on the line below.

What does the existence of these three substructures – i.e., the vertical question/answer dialogue, the horizontal deductive or inductive logic, and the narrative introductory structure – do for you in helping you discover the ideas you need to build a pyramid? Knowing the vertical relationship, you can determine the kind of ideas you need in each grouping (i.e., those that will answer the question). Knowing the horizontal relationship, you can judge that the ideas you bring together are of a like kind (i.e., proper parts of an inductive or deductive argument). And–most important–knowing the reader's question will ensure that all the ideas you do bring together are relevant (i.e., exist only because they help to answer that question).

Naturally, you want to go about applying these insights in an orderly way, and that's what Chapter 3 will tell you how to do.

3

HOW TO BUILD A PYRAMID STRUCTURE

The problem you generally face as you sit down to write is that you know roughly what you want to write about, but not specifically what you want to say or how you want to say it. This sense of uncertainty is hardly enhanced by knowing that the ideas you eventually put down, whatever they be, must end up forming a pyramid.

Nevertheless, there is a good deal that you *do* know about your end product that you can build on. To begin with, you know that you will have a sentence at the top of the pyramid that will have a subject and a predicate. You also know that the subject of that sentence will be the subject of your document.

In addition, you know that the sentence will serve as the answer to a question that already exists in the reader's mind. And that

question will have arisen because of a situation (with which the reader is familiar) within which a complication developed (with which he is also familiar) that raised the question that caused you to need to write in the first place. You may even know roughly some of the points you want to make.

That is quite a bit to know. You can use this knowledge in building your pyramid either by starting at the top and working down, or by starting at the bottom and working up. The first way is generally easier than the second, and so should be tried first.

THE TOP-DOWN APPROACH

It is generally easier to start at the top and work down because you begin by thinking about the things that it is easiest for you to be sure of – your subject and the reader's knowledge of it, which you will remind him of in the introduction.

You don't want simply to sit down and begin writing the opening paragraph of the introduction, however. Instead, you want to use the structure of the introductory flow to pull the right points out of your head, one at a time. To do so, I suggest you follow the procedure shown in Exhibit 4 and described below.

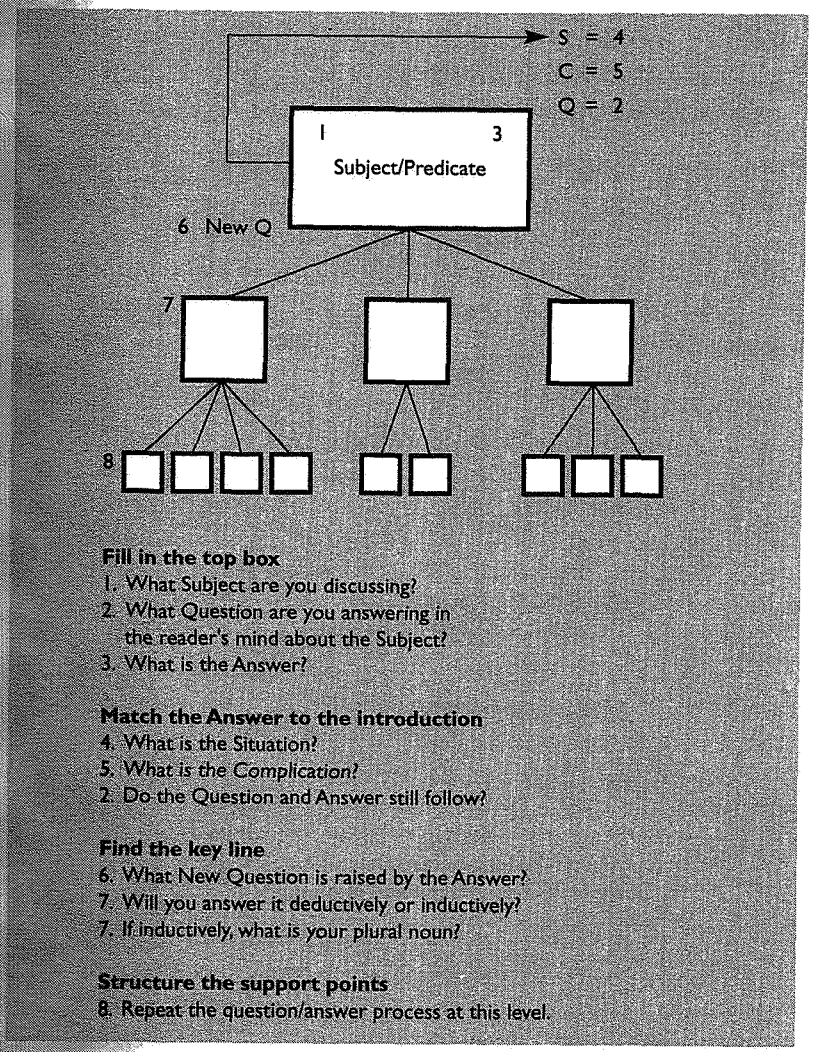
1 *Draw a box.* This represents the box at the top of your pyramid. Write down in it the subject you are discussing.

2 *Decide the Question.* Visualize your reader. To whom are you writing, and what question do you want to have answered in his mind about the Subject when you have finished writing?

3 *Write down the Answer,* if you know it.

4 *Identify the Situation.* Next you want to prove that you have the clearest statement of the Question and the Answer that you can formulate at this stage. To do that, you take the Subject, move up to the Situation, and make the first noncontroversial statement about it you can make. What is the first thing you can say about it to the reader that you know he will agree is true – either because he knows it, or because it is historically true and easily checkable?

Exhibit 4 The elements of the structure check each other



5 *Develop the Complication.* Now you say to yourself, 'So What?' This should lead you to think of what happened in that Situation to raise the Question. Something went wrong, perhaps, some problem arose, or some logical discrepancy became apparent. What happened in the situation to trigger the question?

6 *Recheck the Question and Answer.* The statement of the Complication should immediately raise the Question you have already written down. If it does not, then change it to the one it does raise. Or perhaps you have the wrong Complication, or the wrong Question, and must think again.

The purpose of the entire exercise is to make sure you know what Question it is you are trying to answer. Once you have the Question, everything else falls into place relatively easily.

Let me demonstrate how your thinking would develop by using the technique to rewrite the memorandum shown in Exhibit 5. It comes from the Accounting Department of a large beverage company in the United States.

When the company's drivers deliver the product to a customer, they send back to the Accounting Department a delivery ticket with a set of code numbers, the date, and the amount of the delivery. These delivery tickets are the basis of the billing system, which works something like this:

FIVE WEEKS			
Process ▶ delivery tickets	Send ▶ bill	Receive ▶ check	Process Payment

One of the company's customers, a hamburger emporium we'll call Big Chief, gets an awful lot of deliveries. For its own accounting purposes, it would like to keep daily track of how the bill is mounting up. It wants to know if it can't keep the delivery tickets along with each delivery, record them on a computer tape, calculate the total, and then send the tape and its check once a month to the headquarters office of the beverage company. In other words, it is proposing a system that would work like this:

ONE DAY	
Receive tape and check ▶	Process Payment

Exhibit 5 Original Big Chief memorandum

To: Mr Robert Salmon
From: John J. Jackson
Subject: Big Chief Date: March 7, 1991

We have been requested to review the feasibility of processing Big Chief's (Parent Number 8306) N/A Delivery Tickets via tape into our National Accounts System. This processing is to be accomplished by Big Chief and us on a prepayment basis. We have completed our review of this request and our findings are as follows:

1. Our primary requirement for accepting any National Accounts data from an outside source is that we receive records in a prescribed format:
   a. Parent Number
   b. Outlet Number
   c. Ticket Number
   d. Dollar amount of each ticket
   e. Delivary Date of each ticket

   If the Parent and Outlet Numbers are not available from Big Chief, we will supply this information to them from our Customer Master File list. This information could then be incorporated into the Big Chief system for future ease in the processing of ticket data.

2. Big Chief will produce an extract program that will be run against their file (A/P Liability) to extract all ticket information presently on that file. The output file created by this program will be in a format acceptable to the N/A subsystem APNND, Cash Receipt Advice (see Record Layout). This data, in the form of a tape, will then be sent to us for balancing purposes and at the same time, Big Chief's check, accompanied by a detailed listing of the information on the tape (see Report Layout #1) will be sent to the National Accounts lock box.

   The tape received by our Data Processing Department will be balanced according to our prescribed procedures. The final result of this balancing is that the dollar amount of the submitted check and the detail of the tape must 'zero balance' (.00).

3. Upon completion, the balanced cash tape will be processed through the National Accounts System. This will produce a matchup by ticket number against the N/A Updated Statement History file and the production of National Syrup Account Billing Statements.

The head of the Accounting Department has been asked if the change would be feasible, and has answered in his present memorandum by saying essentially, 'Here's how the new system

would work,' without actually answering the question. Had you been he, and used the technique in Exhibit 4, here's what would have happened:

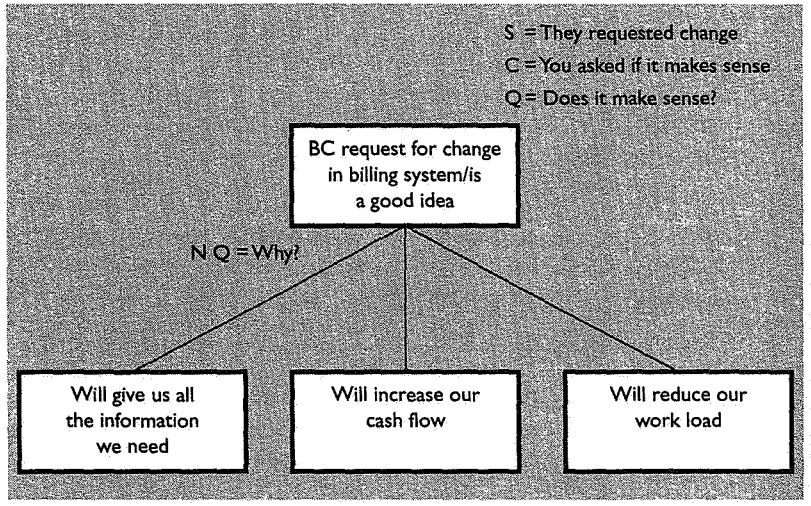
1 You would have drawn a box and said to yourself, 'What *Subject* am I discussing?' (BC request for change, Exhibit 6.)

2 What *Question* am I answering in the reader's mind about the Subject?' (Is it a good idea?)

3 What's the *Answer?* (Yes.)

4 Now let me check that that is really the Question and really the Answer by thinking through the introduction. To do that I take the Subject and move up to the *Situation.* The first sentence of the Situation must be a statement about the Subject. What is the first noncontroversial thing I can think of to say about the Subject –something I know the reader will not question, but will accept as fact? (They have requested a change in the procedure.) When you go to write the introduction out, you will of course in this paragraph explain the nature of the change, but for the purposes of working out your thinking you need only get clear the essence of the point of the paragraph.

Exhibit 6 New Big Chief Structure



5 Now I look at the Situation and say about it, 'So what?' This should lead me directly to a statement of the *Complication.* (You've asked me whether it makes sense.)

The Question, (2), as you've stated it should now be the obvious next thing that would pop into the reader's mind (Does it make sense?). Since that's roughly what you've stated as your Question, you can see that both it and the Answer match, so you have proved that the point you are making is valid for the reader.

6 Given the statement that the change does make sense, you can now move down to determine what *New Question* would be raised in the reader's mind by your stating it to him. (Why?)

7 The answer to any Why? question is always 'Reasons', so you know that the points you need across the Key Line must all be reasons. What might your reasons be?

- It will give us the information we need.
- It will increase our cash flow.
- It will reduce our work load.

8 After determining that in fact these points are the right points and in logical order, you can move down and spell out what you need to say to support each one. In the case of so short a document, however, you can probably get away with assuming they are easily available in your mind and will come to you as you get to each section to write it.

As you can see, the technique has forced the writer to draw from his mind only the information that will be relevant to the reader's question. But in doing so, it has helped push his thinking to deal fully with the question, rather than only partially as in the original example. And of course, if he follows the top-down order of presenting the ideas in writing, the entire message will be remarkably easy for the reader to absorb.

THE BOTTOM-UP APPROACH

There may be frequent occasions when you find that your thinking is not fully enough developed to work out the top part of the pyramid. Perhaps you can't decide precisely what your Subject is, or the Question isn't clear to you, or you can't sort out what the reader does and doesn't know for sure. In such cases, simply move down to the Key Line level.

If you can think of any Key Line points, fine; but often you won't be able to. Do not despair. You can work out the ideas from the bottom up by following a 3-step process.

1 List all the points you think you want to make.

2 Work out the relationships between them.

3 Draw conclusions.

Again, let me demonstrate how this technique would work by using a document that needs rewriting (Exhibit 7). This is a memorandum written by a young consultant to his engagement manager after 2 weeks of working on his first assignment. The client was a printing company in England.

I know nothing about the situation or the subject other than what is stated in the memorandum. We therefore have to treat the document as a closed universe, withholding judgment on whether what he says is true or right. We just want to make what it says clear. The points he makes are listed in Exhibit 8. The next step is to work out their relationships to each other.

Go first to the recommendations, since it is always easier to determine the validity of action ideas than of situation ideas (see Chapter 9). What is the relationship between simplifying the process and changing the methods? None; they both say the same thing, so there is nothing to be gained by analyzing these.

We move on to the problems, and in looking at them a moment, it becomes apparent that there are some cause-and-effect relationships implied here, which you want to lay out as visually as possible (Exhibit 8–Step 2). This analysis reveals two separate lines of reasoning, with the possibility that some points that should be made have been omitted.

Exhibit 7 Original TTW memorandum

To: Date: August 22, 1991
From: Subject: TTW

Following is a summary of the results of this last 2 weeks' work.

As we already knew composing costs are the most important part in all new settings ranging from 40 percent in Hardbacks to 50-55 percent in Paperbacks.

The most important elements in composing costs are:

Machine composition	30-50%
Reading	17-25%
First proof and revise	10-16%
Make up	10-20%
Imposition and plate laying	10-15%

A comparison with PAR standards shows that TTW has a relatively low productivity in composing. At the moment the composing estimators are working on some specific examples I have given to them.

Every job in composing goes through the same steps basically to ensure a high level of quality. This may explain partly why they are considered uncompetitive for composing simple jobs.

There is a good deal of interest in Aylesbury in finding out what are the facts behind their composing costs. I have spoken about it with Roy Walter, Brian Thompson and George Kennedy. Kennedy is willing to set up an experiment in order to find out: (1) if there are any steps in the composing process that can be eliminated, particulary for certain jobs; and (2) what are the causes behind the apparent low productivity – i.e., why do they rank below PAR.

Composing is at the present moment overloaded. Most of the jobs run behind schedule in the department. The present undercapacity is particularly acute in hand composition. TTW is paying lower wages than other printers in the area and it is becoming hard to get and retain compositors.

At the moment, they are faced with a new union demand. Also two compositors just left.

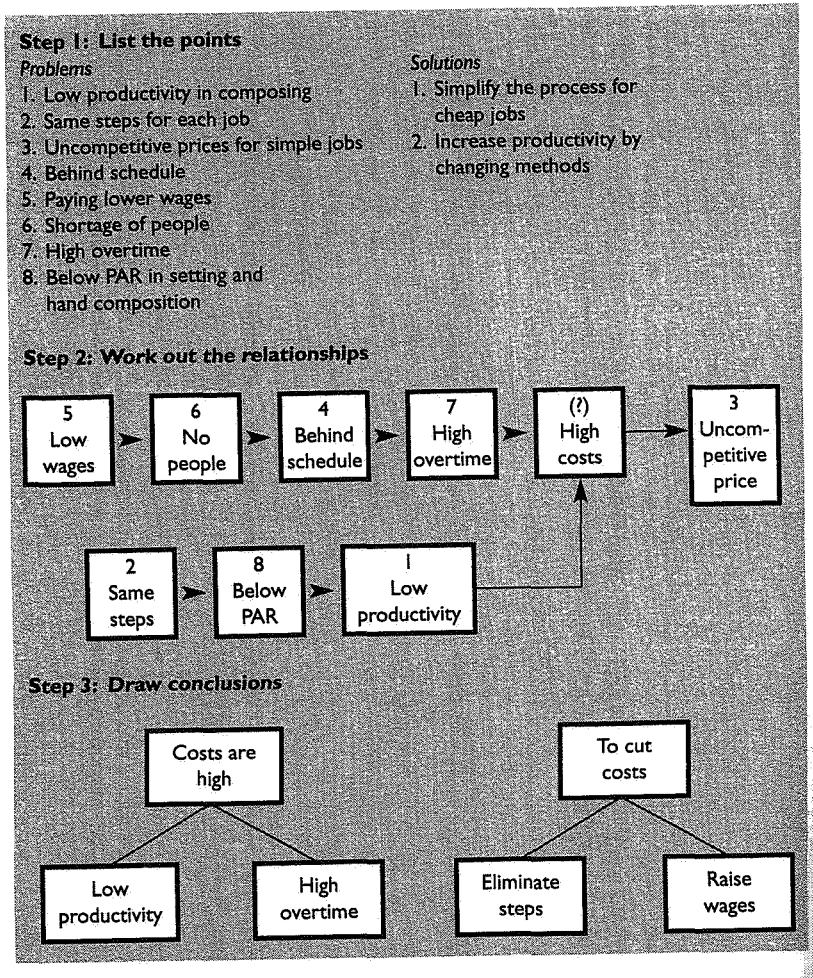
The department has less people than budgeted and their overtime hours exceed budget by more then 50 percent.

CONCLUSIONS

1. It seems feasible to reduce composing costs by:
   a. Simplifying the process for cheap jobs
   b. Increasing productivity by changing methods.
2. In order to carry out the first one it would be necessary to do some experiments on specific jobs, following them throughout the whole process, and controlling the marginal effect on quality of changes in the number and timing of checks, and the customer's reaction to them. The savings involved could be up to 10 percent of total composing costs.

   The second way of reducing costs requires, I believe, detailed methods study. TTW ranks 20-50 percent below PAR in setting and hand composition and it seems it would be possible to do better than that.
3. A comparison between TTW and Baird, Purnell or Waterlow may throw some light on this. George Kennedy and Roy Walter seemed to be very interested in carrying out the comparison. I have told them it may not be very meaningful after all.
4. The attitudes with respect to composing costs in Aylesbury are mixed. Gerry Calvert feels that they are definitely high, George Kennedy claims that there is no hard evidence that they are and Roy Walter recognizes that for him they are a mystery. They all seem very willing to investigate them.

Exhibit 8 TTW analysis



Now you're ready to draw some conclusions. Either he's saying that the costs are high because the productivity is low and the overtime is high, or he's saying that to cut the costs you have to simplify the methods and raise the wages. To decide which, you want to think through the introduction. What does the original memo indicate the reader already knows?

Apparently he knows that costs are important, that TTW is uncompetitive in its pricing of simple jobs, and probably that nobody at TTW knows whether the costs are too high or not. In that case, your thinking might go something like this:

1. *Subject* = composing room costs.
2. *Question* = are they too high?
3. *Answer* = yes.
4. *Situation* = composing room costs are the most important element in total cost.
5. *Complication* = don't know if they are too high a proportion, but uncompetitiveness indicates they might be.

   Question (2) = are they too high?

   Answer (3) = yes.
6. *New Question* = how do you cut them?
7. *Key Line* = eliminate unnecessary steps in the composing process and raise wages to competitive levels.

Exhibit 9 shows these ideas in what might have been an acceptable version of this memorandum. You may not agree with the young consultant's reasoning, but at least it is presented so clearly that the reader can determine whether he agrees with it or finds things to question about it.

I have reprinted the memorandum in full here because I want to demonstrate that the total introduction includes a statement of the Key Line points. With these included, the reader can get your entire thinking in the first 30 seconds or less of reading. And since the rest of the document exists only to explain or defend what you have already stated, he can be confident that no important points are going to jump up and surprise him later on. Consequently, he can scan if he has limited time available. Indeed, if your entire thinking is not clear to the reader in the first 30 seconds of reading, you should rewrite.

In addition, the headings serve to highlight the major points of the structure so that the reader can quickly pick up the general

Exhibit 9 REwritten TTW memorandum

To: Date: August 22, 1991
From: Subject: TTW

I have spent the past 2 weeks in Aylesbury looking at costs in the Composing Room. As we already knew, composing costs represent 40 percent of hardback costs, and 50-55 percent of paperbacks. TTW does not know whether these costs are too high, but the company is considered uncompetitive for simple jobs.

Our preliminary investigation indicates that composing costs could probably be cut considerably by:

- Eliminating unnecessary steps in the composing process
- Raising wages to competitive levels.

ELIMINATING STEPS

TTW ranks 20-50 percent below PAR standards in setting and hand composition. A look at composing methods shows that every job goes through basically the same steps to ensure high quality, whether it is a Bible or a thriller. This may explain partly why they are considered uncompetitive.

I have discussed these findings with Roy Walter, Brian Thompson, and George Kennedy. Kennedy is willing to set up an experiment to learn (1) whether any steps in the process can be eliminated, particularly for simple jobs, and (2) the causes of the low PAR standing.

Beginning next week we will follow a few simple jobs through the process, controlling the marginal effect on quality of changes in the number and timing of checks, and test the customer's reaction to them. The savings involved could be up to 10 percent of total composing costs. We will also carry out a detailed methods study to try to close the PAR gap.

RAISING WAGES

TTW pays lower wages than other printers in the area, and is finding it difficult to get and retain compositors. Two compositors just quit, leaving the department with fewer people than budgeted. As a result, most jobs are running behind schedule, and overtime hours exceed budget by more than 50 percent.

The company presently faces a new union demand, which may force them into higher wages. If so, they should be able to hire appropriate people and eliminate the overtime charges.

thrust of your subordinate arguments if the document is a lengthy one. To this end, you want to take some care in the way you word the headings (see Chapter 6, *How to Highlight the Structure*), making sure

to state them so that they reflect ideas rather than categories. Never have a heading called 'Findings,' for example, or 'Conclusions.' Such headings have no scanning value.

CAVEATS FOR BEGINNERS

It is clear that the rigidity of the pyramid rules enables you to start with an idea anywhere in the pyramid and discover all the others. Essentially, though, you will either be working from the top down or from the bottom up. I have tried to tell you exactly what to do in a general way, but the possibilities are endless, so that questions are inevitable. Following are the answers to some of the most commonly asked questions from beginning users of the pyramid.

1 *Always try top down first.* The minute you express an idea in writing, it tends to take on the most extraordinary beauty. It appears to have been chiseled in gold, making you reluctant to revise it if necessary. Consequently, never begin by just dictating the whole document 'to get it all down,' on the assumption that you can figure out the structure more easily afterwards. The chances are you'll love it once you see it typed, no matter how disjointed the thinking really is.

2 *Use the Situation as the starting point for thinking through the introduction.* Once you know what you want to say in the bulk of the introduction–Situation, Complication, Question, and Answer–you can place these elements in any order you like as you write, depending on the effect you want to create. The order you choose affects the tone of the document, and you will no doubt want to vary it for different kinds of documents. Nevertheless, begin your thinking with the Situation, since you're more likely to be able to think up the correct Complication and Question following that order.

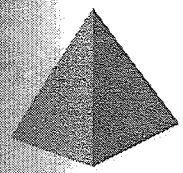
3 *Don't omit to think through the introduction.* Very often you'll sit down to write and have the main point fully stated in your head, from which the Question is obvious. The tendency then is to jump

directly down to the Key Line and begin answering the New Question raised by the statement of the main point. Don't be tempted. In most cases, you will find that you end up structuring information that properly belongs in the Situation or Complication, and therefore forcing yourself into a complicated and unwieldy deductive argument. Sort out the introductory information first so that you leave yourself free to concentrate solely on ideas at the lower levels.

4 *Always put historical chronology in the introduction.* You cannot tell the reader 'what happened' in the body of the document, in an effort to let him know the facts. The body can contain only ideas, and ideas can relate to each other only logically. This means that you can talk about events only if you are spelling out cause-and-effect relationships, since these had to be discovered through analytical thinking. Simple historical occurrences do not exist as the result of logical thought, and therefore cannot be included as ideas.

5 *Limit the introduction to what the reader will agree is true.* The introduction is meant to tell the reader only what he already knows. Sometimes, of course, you won't know whether he actually knows something; at other times, you may be certain that indeed he does not know it. If the point being made can be easily checked by an objective observer and deemed to be a true statement, then your reader can be presumed to 'know' it in the sense that he will not question its truth.

6 *Be sure to support all Key Line points.* An idea has to be supported until you have answered all the questions likely to be raised by it. Naturally, not every point needs the same depth of support. At the Key Line level, however, all points must have at least one level of support. This is particularly true of the 'therefore' point in a deductive argument. If you find yourself with no need to support the final point, then you have overstructured your argument and probably need only an inductive grouping.



4

FINE POINTS OF INTRODUCTIONS

As we saw in *How to Build a Pyramid Structure*, thinking through the introduction is the key step in discovering the ideas that must be presented in a document. By summarizing what the reader already knows, the introduction establishes the relevance of the question to which your document will give him the answer. You can then devote your energies to answering it.

However, actually finding the structure of the introduction can be a relatively complex and time-consuming activity. To this end, you may want a more comprehensive understanding of the theory and nature of initial introductions than was given earlier. You will also want some insight into the nature of the introductory comments needed at each of the key structural points in the body of the document.

INITIAL INTRODUCTIONS

The initial introduction can be thought of as a circle around the top of your pyramid, outside the structure of the

ideas you are presenting (Exhibit 10). It always tells the reader a story he already knows, in the sense that it states the Situation within which a Complication developed that raised the Question to which the document is giving the Answer. Why does it always have to be a story, and why one that he already knows?

Why a Story?

If you think about it for a moment, you can accept that nobody really wants to read what you've written the way he *really* wants to read a novel that everyone has assured him is both gripping and sexy. He already has a multitude of jumbled and unrelated thoughts in his head, most of which are on other subjects, and all of which are very dear and interesting to him. To push these thoughts aside and concentrate only on the information you present, with no prior conviction of its interest to him, demands real effort. He will be pleased to make that effort only if there is a compelling enticement for him to do so.

Even if he is quite eager to know what your document contains, and convinced of its interest, he must still make the effort to push aside his other thoughts and concentrate on what you're saying. All of us have had the experience of reading a page and a half of something and suddenly realizing that we haven't comprehended a word. It's because we didn't push aside what was already in our heads.

Consequently, you want to offer the reader a device that will make it easy for him to push his other thoughts aside and concentrate only on what you're saying. A foolproof device of this sort is the lure of an unfinished story. For example, suppose I say to you:

'*Two Irishmen met on a bridge at midnight in a strange city. . .*'

I have your interest actively engaged for the moment, despite whatever else you may have been thinking about before you read the words. I have riveted your mind to a specific time and place, and I can effectively control where it goes by focusing it on what the two Irishmen said or did, releasing it only when I give the punch line.

That's what you want to do in an introduction. You want to build on the reader's interest in the subject by telling him a story about it. Every good story has a beginning, a middle, and an end. That is, it

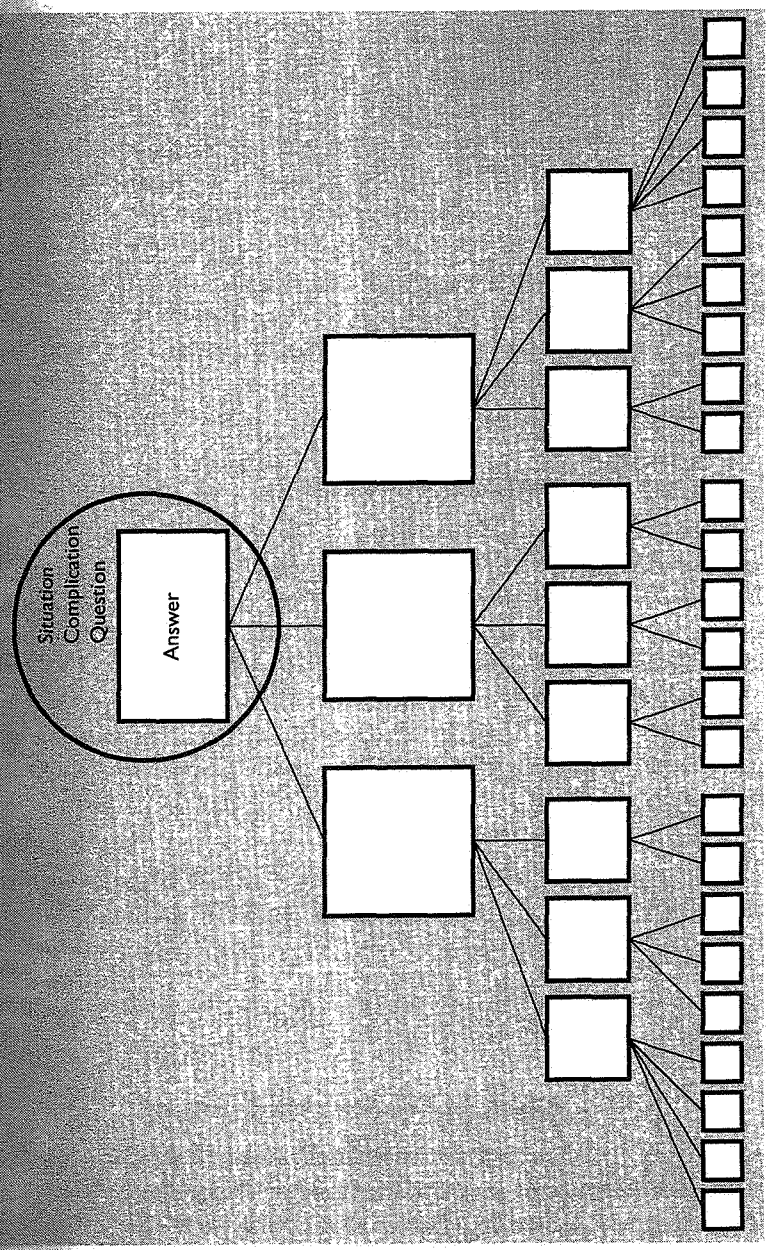


Exhibit 10 Introductions should tell a story

establishes a situation, introduces a complication, and offers a resolution. The resolution will always be your major point, since you always write either to resolve a problem or to answer a question already in the reader's mind.

But the story has also got to be a 'good' story for the reader. If you have any children you know that the best stories in the whole world are ones they already know. Consequently, if you want to tell the reader a really good story, you tell him one he already knows or could reasonably be expected to know if he's at all well informed.

Psychologically speaking, of course, this approach enables you to tell him things with which you know he will agree, prior to your telling him things with which he may disagree. Easy reading of agreeable points is apt to render him more receptive to your ideas than confused plodding through a morass of detail.

How Long Should It Be?

How long should an introduction be? How long should a man's legs be? (Long enough to reach the ground.) The introduction should be long enough to ensure that you and the reader are 'standing in the same place' before you take him by the hand and lead him through your thinking.

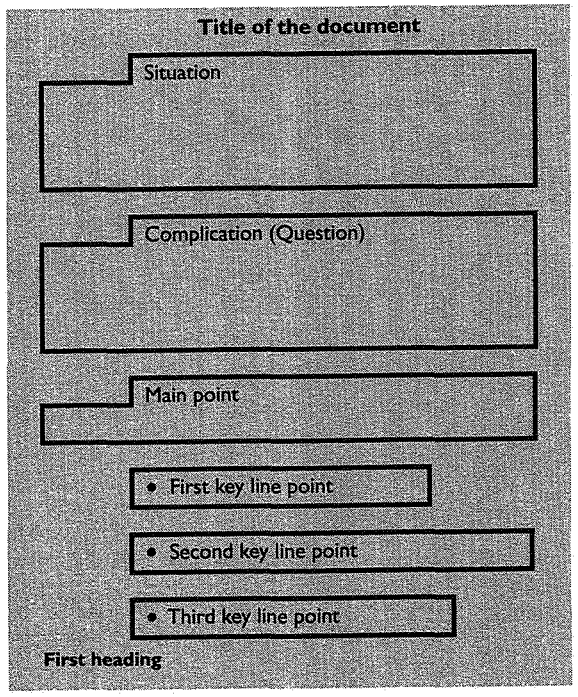
Generally, this means two or three paragraphs, arranged as shown in Exhibit 11. The Situation and the Complication can each be as long as three or four paragraphs, but never more than that. It can't take very much to remind someone of what he already knows. Indeed, if you find yourself littering the introduction with exhibits, you can be sure that you are overstating the obvious.

By contrast, the introduction can also be as short as a sentence: 'In your letter of January 15 you asked me whether. . .' The closer you are in your everyday dealings to the person to whom you are writing, the shorter the introduction can get. But it must say enough to remind the reader of his Question.

Where Do You Start the Situation?

You begin writing the Situation by making a statement about the subject that you know the reader will agree with because you are telling him something that he already knows. If you find you can't

Exhibit 11 Set out the Key Line points at the beginning



make a statement about the subject, then either you have the wrong subject, or you're starting in the wrong place to talk about it.

When you can readily identify the reader by name, as in a letter or memorandum, determining where to start is usually fairly straightforward. You start at the point where you can make a self-sufficient and noncontroversial statement about the subject – self-sufficient in the sense that no previous statement is needed to make the precise meaning of this one clear, and noncontroversial in the sense that you can expect him automatically to understand it and agree to it.

If you are writing a report for wide circulation, however, or a magazine article or a book, the job is not so much to remind the reader of the question as to plant one. Here getting started is a bit more difficult. Assume that your readers are moderately well informed, and present an explanation of what is already generally accepted knowledge on the subject. By arranging known material in a narrative form, and

usually in a way that they haven't thought about it before, you inspire your readers to ask the question you wish to address.

The key characteristic of all opening Situation sentences is that they leave you expectant for further information – and that is what qualifies them to be openers. Each one establishes the base for a story to come. Here are some typical Situation opening sentences:

- Energoinvest is considering the possibility of exporting alumina from its Mostar plant to Ziar in Czechoslovakia. (Memorandum)
- Every major health service is beset by increasing pressure on already scarce resources – and the Irish Health Service is no exception. (Report)
- If we accept the common usage of words, nothing can be more readily disproved than the old saw, 'You can't keep a good man down.' (Book)

What's a Complication?

The Complication of the introduction is not a complication in the everyday sense of the word; it is the Complication to the story. It describes an alteration to a stable situation, rather than a problem per se, although sometimes the alteration *is* a problem. Exhibit 12 shows several possible kinds of complications.

Exhibit 12 The Complication states an alteration to the Situation

SITUATION	COMPLICATION	QUESTION
Regognized stable Situation	Something went wrong	What do we do?
	Something could go wrong	How can we prevent it?
	Something changed	What should we do?
	Something could change	How should we react?
	Here's what you might expect to find in it	Do we find it?
	Here's someone with a different point of view	Who is right?
	In this situation we have three alternatives	Which one should we take?

Exhibit 13 Some patterns of introduction

President Carter unveiled his welfare reform plan August 6, just two days short of eight years after the announcement of Richard M. Nixon's Family Assistance Plan. Yet the events and programs — despite the eight years that separate them — bear a striking similarity. Mr. Nixon said that the plan would be 'a total reform — the transformation of a system frozen in failure and frustration into a system that would work and would encourage people to work.'
The question to ask today is, do we still need a total reform?
Richard P. Nathan, The Brookings Institute, New York Times, 1978

S = Carter's plan out
C = Just like Nixon's
Q = Is that what we need?

For some time, conservationists have warned that wildlife is disappearing from the green hills and valleys of Africa. Despite a recent ban on sports hunting in Kenya, the great herds of elephant, zebra, wildebeest, giraffe, gazelle, lion, and cheetah continue to decline, and many people believe that we have, finally, reached the end of the game—the carefree romp in the wildlife paradise by white settlers, big-game hunters and profiteering Africans.
The end of that game poses an urgent question: can the animals that remain coexist with Africa's expanding human population?
Peter Beard, New York Times Magazine November 6, 1977

S = Sports ban hasn't stopped decline
C = This may mean the end of all game
Q = Is it the end, or can what's left coexist?

Something is happening in America. Television viewing is going down. Nielsen said that viewing was off by 6.4 percent in the daytime and off by 3.1 percent at night. We're talking about millions of people now and the big question is: Where have these people gone and what are they doing if they aren't watching television?
Art Buchwald, International Herald Tribune 1978

S = TV viewing down
C = Millions of people missing
Q = Where are they?

To illustrate further, Exhibit 13 shows some introductions pulled at random from the daily newspapers, along with an outline of their structures.

Why That Order?

The situation-complication-solution form of the introduction is essential. However, the order of the parts can be varied to reflect the tone you want to establish in the document. Note how the tone changes slightly in each of these examples:

CONSIDERED: situation-complication-solution
In recent years, the Firm has billed dozens of clients large amounts of money for diversification work. However, as yet no one in the London Office can claim the magnum of champagne available to the first consultant who can demonstrate an acquisition or merger by a client that would not have happened without our efforts. Since our diversification work has increased by 40 per cent in the past 5 years, the time is ripe for a Firm Development Project to determine how we can ensure that diversification studies do bring significant benefits to the clients we serve.

This memorandum outlines the major issues and hypotheses that should be resolved and tested during the project.

DIRECT: solution-situation-complication
Our first priority for a Firm Development Project should be one directed toward improving our ability to help clients diversify. In the London Office alone, our work in helping clients find acquisition and merger candidates has increased by 40 per cent over the past 5 years. Yet we cannot point to a single acquisition or merger that would not have happened without our efforts.

This memorandum outlines. . .

CONCERNED: complication-situation-solution
To my knowledge, no one in the London Office has yet conducted a single diversification study for a client that has yielded demonstrable results beyond what he could have done for himself. This situation is startling, since our practice in this area over the past 5 years has grown by 40 per cent. We cannot in conscience go on charging clients for work that does not yield significant benefits and maintain our high reputation. I suggest, therefore, that we conduct a Firm Development Project to determine how we can make diversification studies an area of our practice that is proven to bring significant benefit to clients.

The memorandum outlines. . .

What About the Key Line?

The Key Line not only gives the answer to the new Question raised by the statement of your Main Point, it also indicates

the plan of the document. If it is a lengthy one, therefore, you will want to set the points out in the middle of the page as shown in Exhibit 11. You can then put a heading to represent the first point, and start writing (see Chapter 6, *How to Highlight the Structure*).

Setting the points out enables the reader to get your entire thinking in the first 30 seconds or so of reading. Since anything that follows will serve only to explain or defend these points, you have courteously put the reader in the position of being able to determine whether he needs to go on or is ready to accept your conclusions as they stand. In any case, he now knows what to expect and can read with a greater sense of ease.

If the document is a short one, with only a paragraph or two to support each section, you do not of course want to set out the points and then repeat them in headings. In such cases, use the points as topic sentences to your paragraphs and underline them so that they jump out at the reader.

Remember that the Key Line points should be expressed as *ideas*. It is not sufficient, for example, to write an introduction like the following:

This memorandum describes the project team approach to identifying and achieving significant profit improvements. It is organized in six sections as follows:

Background
Principles of project team approach
What project work is
How the program is organized
Unique benefits and specific results
Prerequisites for success.

Here the setout of the points is useless in the sense of conveying the message of the document to the reader. It simply forces on the reader a string of words that he can't put into perspective – mere excess baggage that wastes his time and delays his understanding.

As a rule of thumb, you never want to have a section labeled 'Background' (or 'Introduction') because the major point it expresses will not be on the same level of abstraction as the other points that follow. In the example above, of course, because the writer is writing about subjects instead of about ideas, the ideas likely

to be behind the subjects will probably not form a clear argument, either inductive or deductive.

Indeed, one suspects that the ideas in the various sections are badly jumbled as they stand. For example, the 'Unique benefits and specific results' should probably be discussed under the 'Principles of project team approach,' and the 'Prerequisites for success' probably belong under 'How the program is organized.' Never write about categories, only about ideas.

Further Examples

If you are beginning to think that it might be difficult to write a good introduction, you're right. More botches are made of introductions than of any other part of a person's writing. However, by reading enough examples you should get a sense of when an introduction sounds 'right,' and keep working at yours until they do.

LETTER

In his article 'Japanese Businessmen: The Yen Is Mightier Than the Sword,' James Sterba credits the Sony Corporation with leading the way in commercial exploitation of the transistor while the inventor, Bell Telephone Laboratories, 'didn't know what to do with it except sell it to the Pentagon.'

The statement is neither descriptive truth nor objective metaphor. Bell Laboratories knew what to do with the transistor before the device was invented.

NEWSPAPER ARTICLE

The Nixon Administration has launched a phony attack on the television networks, and the networks have responded with a bogus defense. Uninstructed people, as a result, have the impression that freedom and liberty are under serious fire in this country.

In fact the issue is what kind of society we want to shape through television. It is a question of whether we want a self-indulgent society with anarchic tendencies, or a society of tighter common bonds including a touch of elitist culture.

REPORT

Adequate supplies of cheap phosphorus are the key to maximizing Greenwalt's profits, since phosphorus and its derivatives account for 75 percent of the company's sales and profits. However, a stable source of cheap phosphorus will not be available until 1996, when the Newfoundland plant comes on-stream. In the interim the high cost of United Kingdom production will adversely affect the company's profit levels.

Given that few major opportunities are likely from non-phosphorus-based business, it is necessary to review our phosphorus position, to ascertain whether anything further can be done to reduce substantially the cost of this material until the end of 1992. Examination indicates that a considerable profit opportunity is available to us. Achieving these savings is the subject of this report.

*ESSAY**

The world has been slow to realize that we are living this year (1930) in the shadow of one of the greatest economic catastrophes of modern history. But now that the man in the street has become aware of what is happening, he, not knowing the why and the wherefore, is as full today of what may prove excessive fears as, previously, when the trouble was first coming on, he was lacking in what would have been a reasonable anxiety.

He begins to doubt the future. Is he now awakening from a pleasant dream to face the darkness of facts? Or dropping off into a nightmare which will pass away? He need not be doubtful. The other was not a dream; this is a nightmare, which will pass away with the morning.

For the resources of nature and men's devices are just as fertile and productive as they were. The rate of our progress toward solving the material problems of life is not less rapid. We are as capable as before of affording for everyone a high standard of life – high, I mean, compared with, say, 20 years ago – and will soon learn to afford a standard higher still.

We were not previously deceived. But today we have involved ourselves in a colossal muddle, having blundered in the control of a delicate machine, the working of which we do not understand. The result is that our possibilities of wealth may run to waste for a time – perhaps for a long time.

* Keynes, J.M., *Essays in Persuasion* (The Royal Economic Society, 1972).

*BOOK**

In the second century of the Christian Era, the empire of Rome comprehended the fairest part of earth, and the most civilized portion of mankind. The frontiers of that extensive monarchy were guarded by ancient renown and disciplined valour.

The gentle, but powerful, influence of laws and manners had gradually cemented the union of the provinces.

Their peaceful inhabitants enjoyed and abused the advantage of wealth and luxury. The image of free constitution was preserved with decent reverence. The Roman Senate appeared to possess the sovereign authority, and devolved on the emperors all the executive powers of government.

During a happy period of more than fourscore years, the public administration was conducted by the virtue and abilities of Nerva, Trajan, Hadrian, and the two Antonines. It is the design of this and of the two succeeding chapters to describe the prosperous condition of their empire; and afterwards, from the death of Marcus Antoninus, to deduce the most important circumstances of its decline and fall: a revolution which will ever be remembered, and is still felt by the nations of the earth.

* Gibbon, Edward, *Decline and Fall of the Roman Empire.*

*LONG-TERM PUBLISHING PROJECT**

A

Weekly Review

OF THE

Affairs of *FRANCE:*

Purg'd from the Errors and Partiality of *Newſ-Writers* and *Petty-Statesmen*, of all Sides.

Saturday, Feb. 19. 1704.

The INTRODUCTION.

THIS Paper is the Foundation of a very large and uſeful Deſign, which, if it meet with ſuitable Encouragement, *Permiſſu Superiorum*, may contribute to Setting the Affairs of *Europe* in a Clearer Light, and to prevent the various uncertain Accounts, and the Partial Reflections of our Street-Scribblers, who Daily and Monthly Amuſe Mankind with Stories of Great Victories when we are Beaten, Miracles when we Conquer, and a Multitude of Unaccountable and Inconſiſtent Stories, which have at leaſt this Effect, That People are poſſeſt with wrong Notions of Things, and Nations Wheedled to believe Nonſenſe and Contradiction.

These examples demonstrate that the length of an introduction is not necessarily related to the length of the writing to follow. Rather, it is related to the needs of the reader. What does he have to be told not only to comprehend fully the significance of your main point, but also to want to read on to learn how you arrived at it?

In Summary

I hope this discussion of opening introductions has made you think that it is important to devote a good deal of thought to ensuring that you write a good introduction. For as you can gather from the examples, a good introduction does more than simply gain and hold the reader's interest. It influences his perceptions.

The narrative flow lends a feeling of plausibility to the writer's particular interpretation of the situation, which by its nature must be a biased selection of the relevant details; and this feeling of plausibility constricts the reader's ability to interpret the situation differently. It also gives a sense of inevitable rightness to the logic of the writer's conclusion, making the reader less inclined to argue with the thinking that follows. Finally, it establishes the writer's attitude to the reader as a considerate one of wanting him clearly to understand the situation – to see behind the language to the reality it represents.

To emphasize the theory behind writing good introductions:

1 *Introductions are meant to remind rather than to inform.* This means that nothing should be included that would have to be proved to the reader for him to accept the statements of your points – i.e., no exhibits.

2 *They should always contain the three elements of a story.* These are the Situation, the Complication, and the Solution. And in longer documents you will want to add an explanation of what is to come. The first three elements need not always be placed in classic narrative order, but they do always need to be included, and they should be woven into story form.

3 *The length of the introduction depends on the needs of the reader and the demands of the subject.* Thus, there is scope to include whatever is

necessary for full understanding: history or background of the problem, outline of your involvement in it, any earlier investigations you or others have made and their conclusions, definitions of terms, and statements of admissions. All these items can and should be woven into the story, however.

SOME COMMON PATTERNS

As time goes on and you find yourself thinking through the introductions to a variety of documents, you will notice some common patterns begin to emerge. Which patterns will become common for you will, of course, depend on the business you are in. But to show you what I mean, here are the five patterns I have seen repeated most often, drawn from both business and consulting. They are:

1. Directives
2. Requests for funds
3. 'How to' documents
4. Letters of Proposal
5. Progress Reviews

Directives

This must be the most common kind of business memorandum written anywhere in the world – reflecting a situation in which you are writing to tell someone else to do something. In this case, you will be planting the question in the reader's mind, rather than reminding him of it.

To illustrate, suppose you are holding a meeting for your field salesmen, at which you are planning to teach them how to present a new selling technique to chain grocery stores. However, in order to do so effectively you need some information from them on a particular problem chain in their local area. How would you structure the introduction? Very much in this manner:

S = At the field sales meeting we want to teach you how to present the Space Management Program
C = Need a profile of a problem chain in your area
Q = (How do I prepare the profile?)

Or, to put it as starkly as possible:

S = We want to do X
C = We need you to do Y
Q = How do I do Y?

In this case the question would be implied rather than stated, since the flow of the writing would not require it to be spelled out. Nevertheless, it is absolutely essential that you spell it out *for yourself* before you begin to write. Otherwise, you run the danger of not being absolutely sure of your question.

In this example, the question is 'How?' Whenever the question is 'How?' the answer is inevitably 'steps,' so that you would end up with a structure something like that shown in Exhibit 14 (overleaf). Note also that the Complication and the Answer are reversals of each other, since the Answer is the effect of carrying out the actions, which of course would solve the problem.

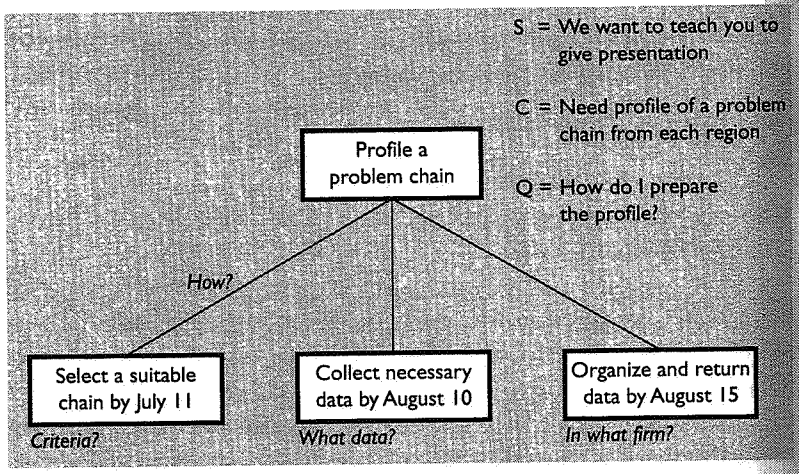
To try another example, suppose you have a procedures manual that various people in the company update or add to, and you want to make sure they all do it in the same way:

S = We have a manual covering activities where nonconformity of action would be detrimental. From time to time needs updating.
C = To ensure compatibility, important to follow the same procedure.
Q = (What is the procedure?)

And again you have another question that would be implied rather than stated in writing. To show the pattern starkly:

S = You do X
C = Must do in Y way
Q = What is Y way?

Exhibit 14 Field Sales Meeting



Requests for Funds

Another very common memorandum type is one requesting funds. For those the reader's Question is always 'Should I approve the request?' and here again the Question would be implied rather than stated, as would the Complication. That is, you would have a formal structure that said:

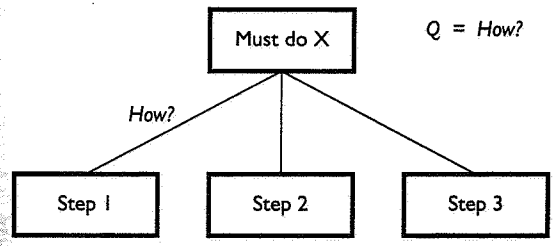
S = The Consumer Group wishes to purchase a Wang System 25 II, together with four CRTs and three printers, at a cost of $___.
C = (They cannot purchase without your approval)
Q = (Should I approve?)

Only the Situation would be stated in the writing, and then the pyramid structure would tell the reader to approve the purchase for some set of relevant reasons.
For example:

We should approve this request because:
The cost will be more than offset by the projected savings
It will greatly increase the Group's productivity
It will create new opportunities for service.

'How to' Documents

Frequently, particularly in consulting, you write because someone has a problem and you are telling him how to solve it. The structure of any 'how to' document is 'steps,' as shown below:



However, the introductory structue varies slightly depending on whether you are telling the reader how to do something he has not done before or whether you are telling him how to do properly what he is already doing. The memorandum on The Role of the Board shown on page 19 in Chapter 2 is an example of the first type:

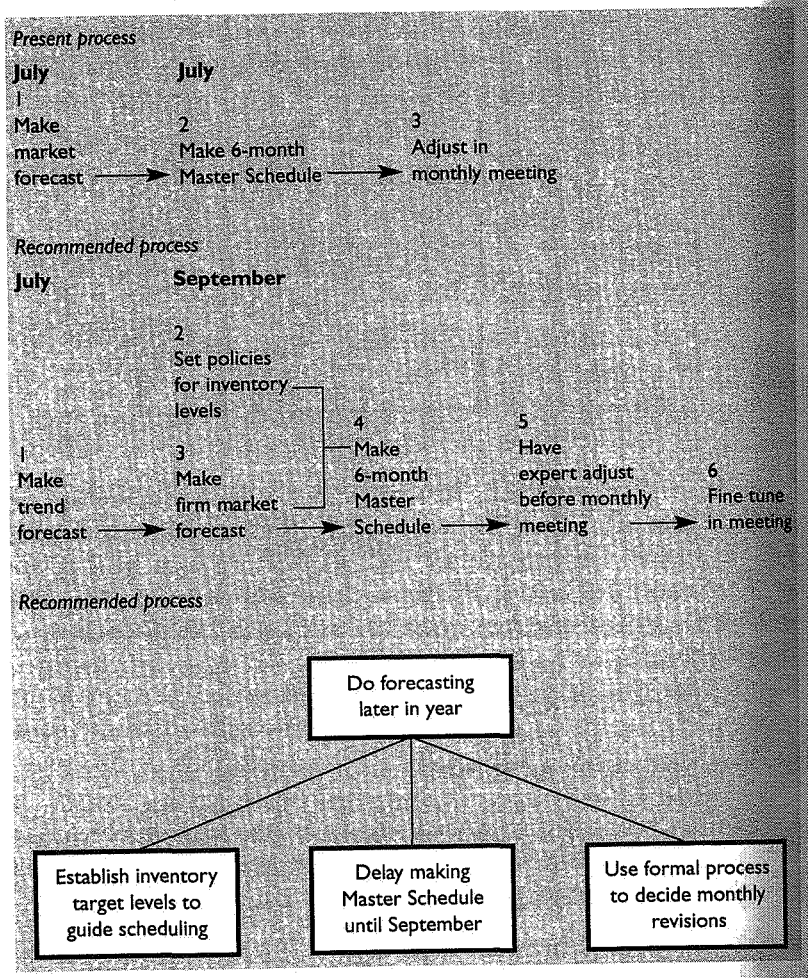
S = Must do X activity
C = Not set up to do so
Q = How do we get set up?

By contrast, suppose you have a company whose market forecasting system gives inaccurate forecasts, and they want you to tell them how to make it give accurate ones. The structure is always:

S = Your present system is X
C = It doesn't work properly
Q = How change to make it work properly?

The trick here is to begin your thinking by literally laying out the present process as they do it now. (See Exhibit 15.) Then lay out the process as you think it should be done. The differences between the first structure and the second tell you what the steps on your Key Line must be.

Exhibit 15 Comparison of Processes



Let me emphasize the importance of making the two processes visible to yourself before you begin to write. You may assume that you know precisely what they are, having been working on them for so long. But unless you lay them out and compare them, the chances of leaving something important out are very great. You cannot be sure your thinking is complete and that you have not left anything out unless you make the actual step-by-step comparison. I have seen

so many examples of incomplete thinking in this area that I make a special point of mentioning it. Indeed, we had an example in the Big Chief memo in Chapter 3.

Letters of Proposal

These documents are the lifeblood of consulting, and have thus had a good deal of thought lavished on them over the years by consulting firms. Most firms follow this approach:

S = You have a problem
C = You have decided to bring in an outsider to solve it
Q = (Are you the outsider we should hire to solve it?)

The Answer to the Question is always 'yes,' of course, followed by a 3-part structure explaining that:

1. We understand the problem
2. We have a sound approach for solving it
3. We have good people to work on it.

This is perfectly logical in concept. However, let me point out that, structurally, the only section that reflects thinking is the approach section. The first section is an extended description of the Situation, playing back to the reader in organized form everything he has told you about how the problem arose. Similarly, the final section, while true, is simply a listing of the qualifications of the people who will be assigned to the team.

The major thinking is done in the approach section, where you specify the steps you will take (never more than 5) to solve the problem. These steps must be stated in end-product terms as explained in Chapter 9, and will serve to define the major phases of the study, with the specific end products to be expected at the end of each phase. It is on the basis of the approach that the client should make his decision to hire, although alas that is not always the case.

Progress Reviews

Finally we come to Progress Reviews. These are usually the formal communications one schedules with the client at the end of each phase of the study, leading up to the final report. After the first one, the structure is always the same.

The first one will say something like this:

S = You people have X problem.
C = We told you in our Letter of Proposal that we would do Y first to solve it. We have now done Y.
Q = What did you find?

Once this presentation has been made, the client will have a particular reaction. Perhaps he will ask you to investigate an anomaly you have uncovered in your work. Or he may approve what you've done and tell you to move on to phase two. At the time of your next progress review, then, you might say something like this:

S = In our last progress review we told you that you had a capacity problem
C = You said you thought this would not be a problem long because you believed your competition was shortly going out of business. You asked us to investigate whether that were the case. We have now completed our investigation.
Q = (What did you find?)
A = We found that you will still have a capacity problem, only worse.

Or to put it in skeletal form:

S = We told you X
C = You asked us to investigate Y, which we have done
Q = What did you find?

What must be apparent by now from these examples is that the pivot on which your entire document depends is the Question, of which there is always only one to a document. If you have two, they must be related: 'Should we enter the market, and if so, how?' is really 'How should we enter the market?' since if the answer to the first question is no, the second question is not dealt with.

On occasion you will not be able to determine the question easily just by thinking through the introduction. In that case, look at the material you intend to include in the body. Whenever you have a set of points you want to make, you want to make them because you think the reader should know them. Why should he know them? Only because they answer a question. Why would that question have arisen?

Because of his situation. So that by working backward you can invent a plausible introduction to give your question a logical provenance.

TRANSITIONS BETWEEN GROUPS

Once you have written your introduction and moved into the body of your document, you must pause periodically to let the reader know where you've been and where you next plan to go – at either the end or the beginning of each major grouping. In doing so, however, you want to make your progress from point to point seem smooth and nonmechanical. Thus, you do not want to say such things as:

> This chapter has looked at the need for priorities. The next chapter looks at how these priorities should be set.

In other words, you do not want to relate what two chapters or sections *do*, you want to relate what they *say* – their major ideas. And you want to do it in such a way that you seem to be looking in two directions at once – back to what has been said and forward to what is to be said. If you make this pause at the beginning of a chapter, section, or subsection, you should use the technique of referencing backward. If the chapters or sections are long ones, then you will probably find it clearer to pause at the end and make a summary before going on.

Referencing Backward

The technique of referencing backward consists simply of picking up a word or a phrase or the main idea of the preceding portion of the pyramid that you are linking, and using it in your opening sentence. You are probably familiar with the technique in transitions between paragraphs. For example:

> No single executive has full-time responsibility for directing Group affairs. The absence of necessary leadership and coordination for senior operating and staff executives results in . . . (list of problems).
>
> The problems stemming from *lack of full-time leadership* are compounded by overlapping or unwieldy responsibility assignments . . .

You follow precisely the same technique at the beginning of a new chapter, a new major section, or a new subsection. Suppose you had just finished a chapter telling the Ritz-Ryan hotel chain that it was not taking full advantage of its common ownership of many hotel, restaurant, and catering operations. You are about to start a new chapter outlining the changes that would have to be made in the top executive structure if the Group is to be in a position to take advantage, and you have a pyramid like that shown opposite. Your linkings, referencing backward, might read as follows:

Between the chapters
The current top executive and board structure suffers from two major shortcomings that severely limit the degree to which Ritz-Ryan can *take advantage of its combined resources.*

Between the two major sections
In addition to appointing a Group Managing Director, a number of changes should be made in the executive structure to establish short, clear lines of authority and responsibility.

Between the first two subsections
Just as only a full-time Chief Executive can *coordinate line and staff activities effectively,* so only a full-time Chief Executive can provide the steady, strong and relentless pressure needed to bring about improvements throughout the organization.

I'm sure you see the technique. The point is to make the transitions unobtrusive yet clear, primarily through picking up the key word or phrase and carrying it forward. You are, of course, carrying it forward to connect with the major point of the next section, which has already been introduced briefly in the 'explanation' part of your original introduction. Thus, here you need not lead up to it with a 'story' as you did previously, since your reader now presumably has as much information as he needs to understand the points. You do, however, need to introduce the grouping of ideas to come under this section, and explain how they support its major point.

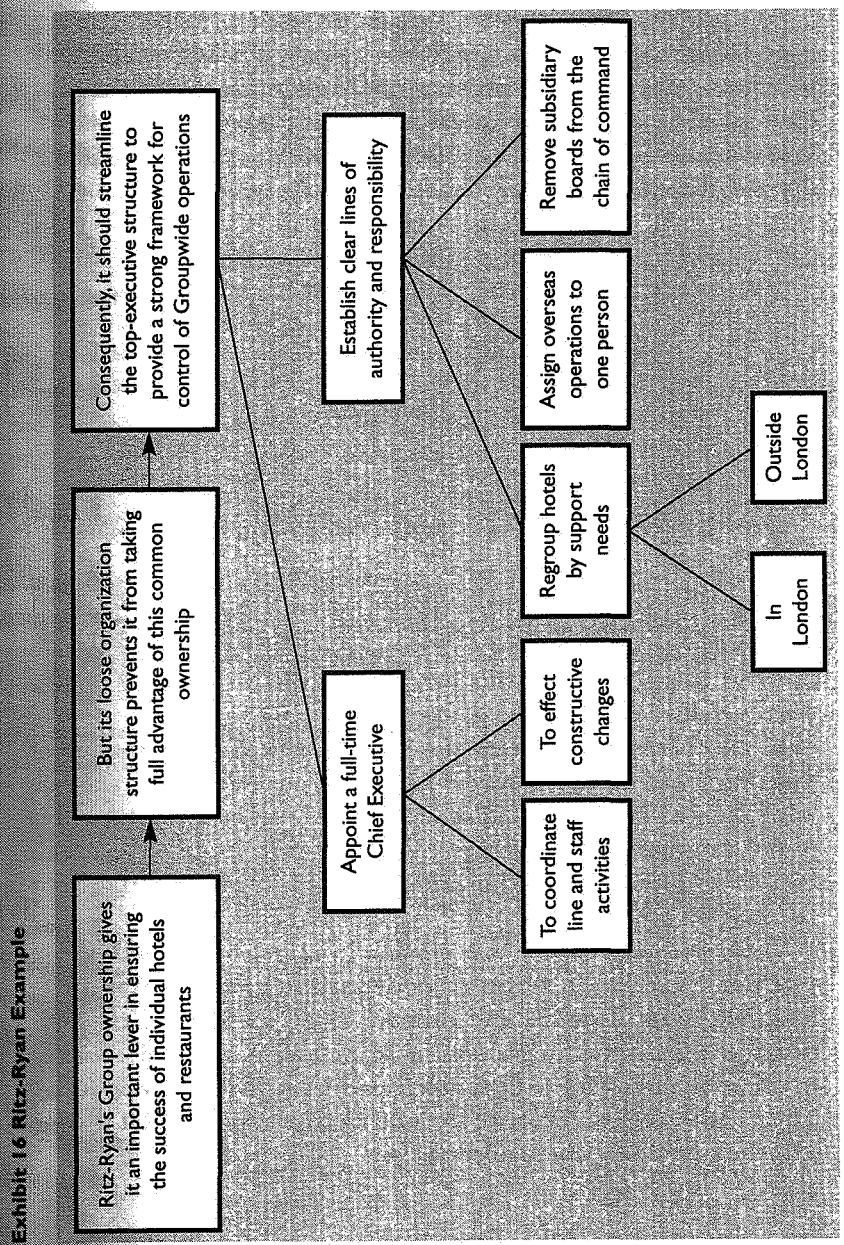


Exhibit 16 Ritz-Ryan Example

Summarizing

Sometimes the chapter or section will be extremely long or complicated, in which case you will want to stop and summarize completely before going on. An example of doing this is at the end of the first section on page 52, where the conclusions about introductions are summarized. Here is the summary that appeared at the end of the Ritz-Ryan chapter we have just been discussing.

> In summary, the top-level executive structure recommended in this chapter consists of the Ritz-Ryan Board and Chairman, a Group Managing Director, and three key executives reporting to him, each in charge of one of the Group's major businesses. These positions and reporting relationships provide a strong framework for long-term leadership and control of Groupwide operations. Only by streamlining the structure to provide this degree of control and accountability can the Group realize the improvement of opportunities identified elsewhere in this report.

Concluding summaries of this sort are not difficult to write if you keep in mind that they are meant to restate, as adroitly as possible, the principal matter and tone of the preceding text. Since you have these in front of you in your pyramid, all you are doing is pulling them together again for the reader.

In all of this positioning, the intention is to make the job of thinking required of the reader as easy as possible. He is, after all, rarely trained in analysis and reflection, and can have nowhere near the understanding of the subject you have even if the subject is his own company. You and he are not peers in interpreting your thinking on the subject.

Thus, you must expect that his mind will not be precisely where you want it to be, in terms of understanding, as you finish one lengthy group of points and prepare to go on to the next. Your transitions are meant to grab his mind, as it were, and pull it back to where it belongs if he is to comprehend what you are trying to say. This is essentially an exercise in good manners, provided it is done gracefully and only where needed.

Concluding

Theoretically, if you write a proper introduction and structure the body of your document to obey the pyramid rules, you should not need a concluding statement. You have, after all, clearly stated your reader's question at the beginning, and answered it fully with impeccable logic. Nevertheless, you may feel a psychological need to end gracefully rather than simply to stop writing. The tendency to end short memos by saying, 'If you have any further questions, please do not hesitate to call,' no doubt reflects this need.

The obvious, perhaps too obvious, procedure at the end of a longer document is to signal the end by putting a line of asterisks in the middle of the page, which is sometimes called a 'sunset.' You then begin your last paragraph with the words, 'In conclusion . . .' and re-emphasize your main point. However, if you favor this approach you want to avoid merely making a lame restatement of what you have already made abundantly clear:

> This report has outlined our recommendations for reorganizing the company and spelled out the specific steps each department must take to bring it about.'

Rather, you want to find a compelling set of words that not only sums up for the reader what you have been saying, but also produces an appropriate emotion in him about it. At least, that is Aristotle's advice about what to do in a conclusion.

That there is an 'appropriate emotion' for the end of a business document may be open to question, but I should think the major feeling you want to leave with your reader is that of a need and desire to act. Consequently, you want to give him some indication of what he is to think about or is able to do with the new knowledge he now possesses as a result of his reading. This can take the form of either a philosophical insight or a prescription for immediate action. Abraham Lincoln, in his second inaugural address, managed to do both:

'With malice towards none, with charity for all, with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in – to bind up the nation's wounds – to care for him who shall have borne the battle, and for his widow and his orphan – to do all which may achieve and cherish a just and lasting peace among ourselves and with all nations.'

You will, of course, want to be as subtle and restrained as your subject and your reader demand, so that what is an appropriate ending will vary with each. An airline president, for example, would probably be offended by strongly emotional statements when being urged to adopt a new planning system. But on a subject on which he already feels strongly, such as deregulation of his industry, he would surely be wide open to emotional appeals.

In general, however, if you insist on appending a conclusion, you will want to write something that puts into perspective the significance of your message. Here, for example, is the concluding paragraph of a report whose message was that it is technically possible to create a European-wide system for rapid retrieval by computer of technical literature.

'If you succeed in launching the system, you will not just have created the means for improved access to scientific and technical information in Europe by users in industry, commerce, the professions, and academia. You will also have created a common market for information, one that makes available the full range of existing sources, not just national collections, to all users. This could lead not only to advances in standardization and harmonization, but also to the development of totally new standards. We find the prospect exciting, and are eager to work with you in launching the pilot project.'

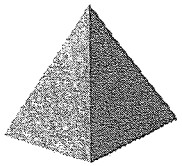
As you may have gathered from my tone, I do not encourage most people to write concluding paragraphs because they are so difficult to do well. Simple pragmatism dictates that you do without. However, there is an occasion on which you will definitely need a concluding section, and that is when you are dealing with future actions.

Sometimes you will write a very long document that recommends a course of action that you think the reader is likely to take. If he takes it, there are some things he ought to do Monday morning to get things in motion. To house these activities, you create a section called *Next Steps*. The only rule is that what you put in this section must be something that the reader will not question. That is, activities must be logically obvious ones.

For example, suppose you are recommending that the client buy a company, and you think that he is going to do so. After 30 pages of explaining why you think it is a good idea, you assume you have him convinced. You then title your next section *Next Steps*, and say something like, 'If you think this is a good buy then you should:

- Call the man who owns it and ask him to lunch
- Call the bank to make sure the money for purchase will be available when you need it
- Reconvene the Acquisitions Committee to handle the administrative details.

Clearly, your reader is not going to say to you, 'Why do I ask him to lunch, why can't I ask him to dinner?' These are self-evident points, and can be accepted without demur. If, on the other hand, they were points that did raise questions in his mind, then you would have to include them in the body of your text, and make certain they fit horizontally and vertically with everything else you're saying.



5

DEDUCTION AND INDUCTION: THE DIFFERENCE

As we have demonstrated, clear writing results from a clear exposition of the exact relationships between a group of ideas on the same subject. Properly organized, these ideas will always form a pyramid, with the various levels of abstraction sorted out and related under a single thought.

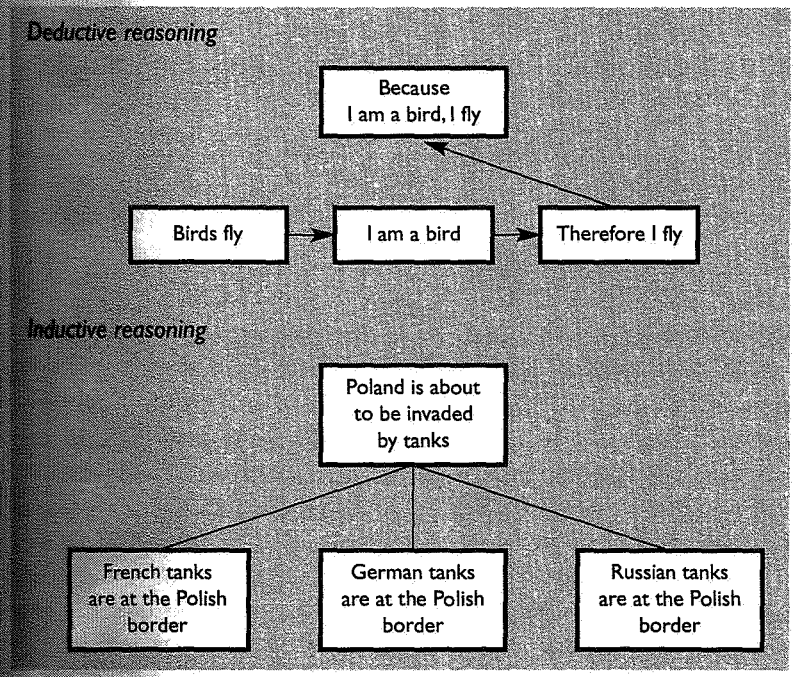
Ideas in the pyramid relate in three ways – up, down, and sideways. An idea above a grouping summarizes the ideas below, while these ideas in turn explain or defend the point above. At the same time, the ideas in the grouping march sideways in logical order. What constitutes logical order differs depending on whether the pyramided group was formed deductively or inductively.

These two forms of reasoning are the only patterns available for establishing logical relationships between ideas. Consequently, an understanding of how they differ and what their rules are is essential to being able to sort out your thinking and express it clearly in writing.

Briefly, the difference is as shown in Exhibit 17. Deduction presents a line of reasoning that leads to a 'therefore' conclusion, and the point above is a summary of that line of reasoning, resting heavily on the final point. Induction defines a group of facts or ideas to be the same kind of thing, and then makes a statement (or inference) about that sameness. The deductive points derive from each other; the inductive points do not.

These differences are really quite enormous, as the next two sections will demonstrate. Once you have digested them, you should have little difficulty in recognizing or sorting out either form of reasoning, or in choosing the one that appropriately permits you to say clearly what you mean.

Exhibit 17



DEDUCTIVE REASONING

Deductive reasoning appears to be the pattern the mind generally prefers to use in most of its thinking, possibly because it is easier to construct than inductive reasoning. In any case, it is usually the pattern one follows in problem solving, and therefore the one people attempt to follow in communicating their thinking. But while it is a useful way to think, it is a ponderous way to write, as I shall hope to show.

How It Works

First, let's understand what deductive reasoning is. It is usually described as taking the form of a syllogism – an argument in which a conclusion is inferred from two premises, one major and one minor. I find these terms confusing in explaining how deductive thinking works in writing, and so I will not use them again.

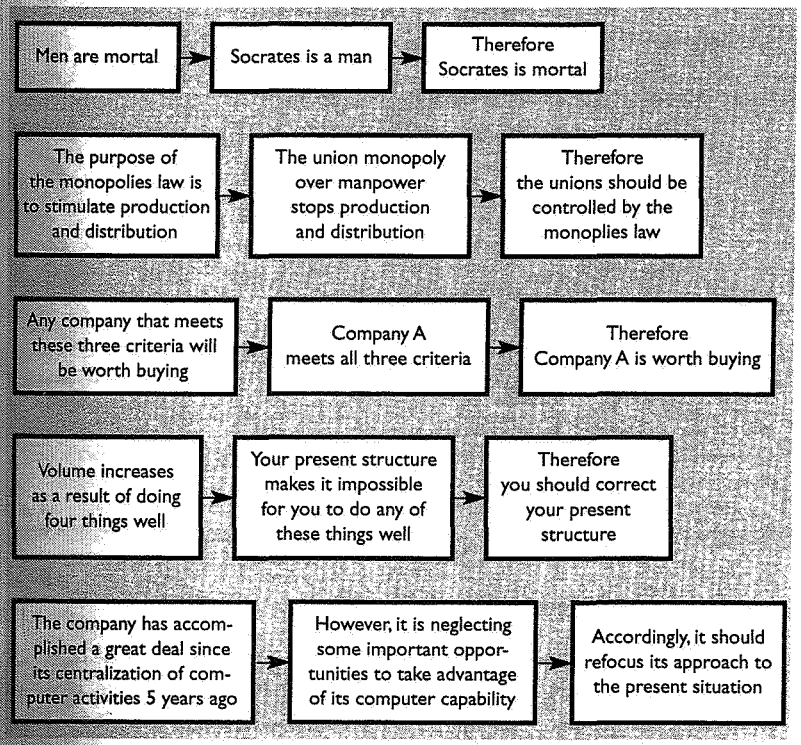
Instead, think of a deductive argument as needing to do three things:

- Make a statement about a situation that exists in the world.
- Make another statement about a related situation that exists in the world at the same time. The second statement relates to the first if it comments on either its subject or its predicate.
- State the implication of these two situations existing in the world at the same time.

Exhibit 18 shows several deductive arguments, each of which can be seen to do precisely these three things. And in each case the point at the top should roughly summarize the ideas grouped below, resting heavily on the final point. Thus, 'Because Socrates is a man he is mortal,' or 'Since the unions behave as a monopoly, they should be controlled by the monopolies law,' or 'If you want to increase your volume, you must correct your present structure,' and so forth.

These are examples of deductive arguments in which each step of the reasoning has been included. But sometimes you will find yourself wanting to skip a step and chain two or more deductive arguments together, since to put in every step would take too long and sound pedantic. This chaining of arguments is perfectly

Exhibit 18 Examples of deductive arguments



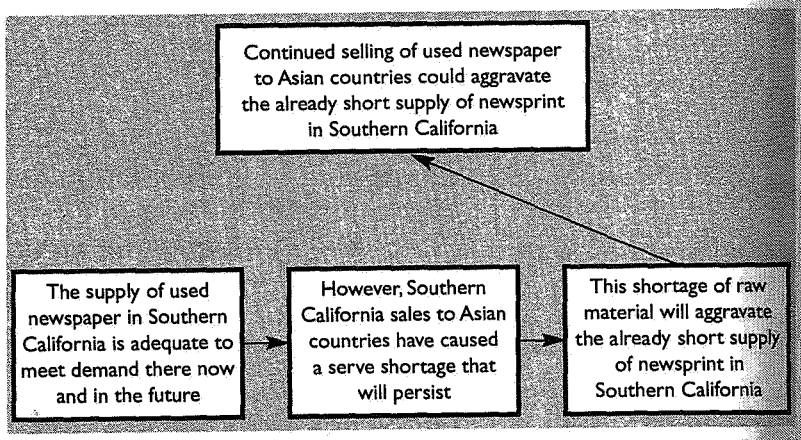
permissible, provided that your reader is likely to grasp and agree with the missing steps. Exhibit 19 gives an example of a chained deductive argument that should probably go something like this:

> We produce enough used newspaper to meet our own demand.
> But we have done more than meet our own demand.
> Therefore we have a shortage.
> A shortage of used newspaper causes a shortage of newsprint.
> We have a shortage of used newspaper.
> Therefore we have a shortage of newsprint.

You can see how boring this argument would be to read if you put in every step, and in general that is my major complaint about the use

of deductive arguments in writing. They are boring, primarily because they make a mystery story out of what should be a straightforward point.

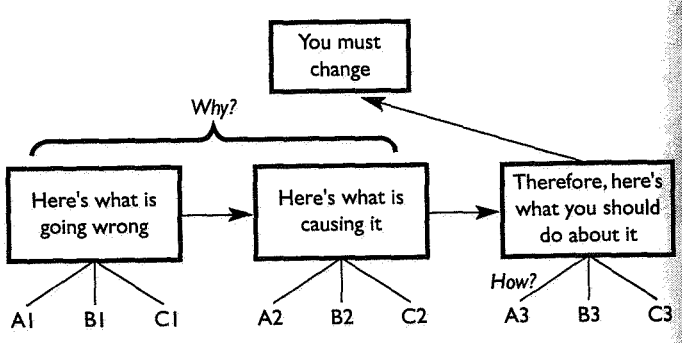
Exhibit 19 Example of a chained deductive argument



When to Use it

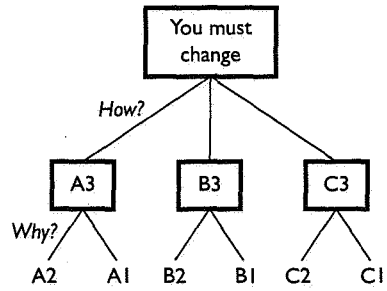
This leads me to urge that, on the Key Line level, you try to avoid using a deductive argument, and strive instead always to present your message inductively. Why? Because it is easier on the reader.

Let's look at what you force the reader to do when you ask him to absorb a deductively organized report. Suppose you wish to tell him that he must change in some way. Your argument would look something like this:



To absorb your reasoning, the reader must first take in and hold the A-B-Cs of what is going wrong. I agree this is not a difficult task, but then you ask him to take the first A of what is going wrong, bring it over and relate it to the second A of what is causing it, and then hold *that* in his head while you make the same match for the Bs and Cs. Next you ask him to repeat the process, this time tying the first A of what is going wrong to the second A of what is causing it, and hauling the whole cartload to hitch to the third A of what to do about it. And the same with the Bs and Cs.

Not only do you make the reader wait a very long time to find out what he should do Monday morning, you also force him to re-enact your entire problem-solving process before he receives his reward. It is almost as if you're saying to him, 'I worked extremely hard to get this answer, and I'm going to make sure you know it.' How much easier on everybody were you simply to present the same message inductively:



Here, instead of answering the 'Why?' question first and the 'How?' question second, you simply reverse the order. And now, while you may indeed have deductive arguments at the lower levels, still you have answered the reader's major question directly, with clear fences in your thinking between subject areas, and all information on each subject in one place.

To explain it another way, at the end of the problem-solving process, you will have come up with a set of ideas that can be sorted onto a Recommendation Worksheet like that shown in Exhibit 20. This permits you to visualize the fact that you have gathered findings that led you to draw conclusions from which you determined recommendations.

In writing to recommend action, you will never give findings that do not lead to conclusions, nor state conclusions that are not based on findings. (The conclusions are, in fact, the findings at a higher level of abstraction.) Nor will you have conclusions that do not lead to recommendations, nor recommendations that are not based on conclusions. (One conclusion can lead to several recommendations, and several conclusions can lead to one recommendation, but there must always be a connection.)

Exhibit 20

Findings	*Conclusions*	*Recommendations*
Sales are off 40% Competitor has added new device Nothing else has changed	Competitive change has cost us 40% of sales	Make similar change in our product

The conclusions generally state the problem that the recommendations solve. Consequently, the effect of the recommendation is to solve the problem you concluded was there. For example, sales are off 40 per cent (finding) because our competitor added a new device to his product (conclusion as to why sales are off), so you recommend that we add a similar device to ours. The effect of the recommendation is to make our product competitive.

Now, you can present this message deductively, one column at a time, in effect:

- Sales are off 40%
- They are off because of competitive changes
- Therefore, I recommend we make similar changes.

Or you can simply turn the whole thing 90 degrees to the left and begin with the recommendation:

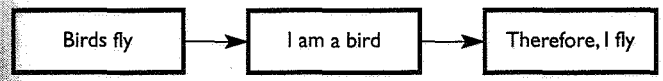
We must redesign to regain position
Competition has done so
Has resulted in a 40% loss of our market share.

The issue here is whether it is better to tell the reader why he should change and then how to go about it, or that he should change and why. As a rule of thumb, it is always better to present the action before the argument, since that is what the reader cares about, unless you face one of those rare cases in which it is the argument he really cares about. I can think of only two situations in which the argument might be more important to the reader than the action:

- If he is going to disagree strongly with your conclusion, so you must prepare him to accept it
- If he is incapable of understanding the action without prior explanation (as in a paper on how to do risk analysis), so that you must give him the reasoning that underlies it.

Few of the recipients of business documents fall into either class, however, so that in general you will find yourself wanting to structure the Key Line of your pyramid to form an inductive argument.

Note that I am talking only about the Key Line here, and not about lower levels. Deductive arguments are very easy to absorb if they reach you directly:



When, however, you must plough through 10 or 12 pages between the first point and the second, and between the second and the third, then they lose their instant clarity. Consequently, you want to push deductive reasoning as low in the pyramid as possible, to limit intervening information to the minimum. At the paragraph level deductive arguments are lovely, and present an easy-to-follow flow. But inductive reasoning is always easier to absorb at higher levels.

INDUCTIVE REASONING

Inductive reasoning is much more difficult to do well than is deductive reasoning, since it is a more creative activity. In inductive reasoning the mind notices that several different things (ideas, events, facts) are similar in some way, brings them together in a group, and comments on the significance of their similarity.

In the example of the Polish tanks cited in Exhibit 17, the events were all defined as warlike movements against Poland. Hence, the inference that Poland was about to be invaded. If, however, the events had been defined as preparations by Poland's allies to attack the rest of Europe, a quite different inference would have been in order.

This brings us to the two major skills one must develop to think creatively in the inductive form:

- Defining the ideas in the grouping
- Identifying the misfits among them.

How to do both things with precision is explained in considerable detail in Chapter 7. But at this point you need only understand the rudiments of how it is done to be able to distinguish the process from deduction.

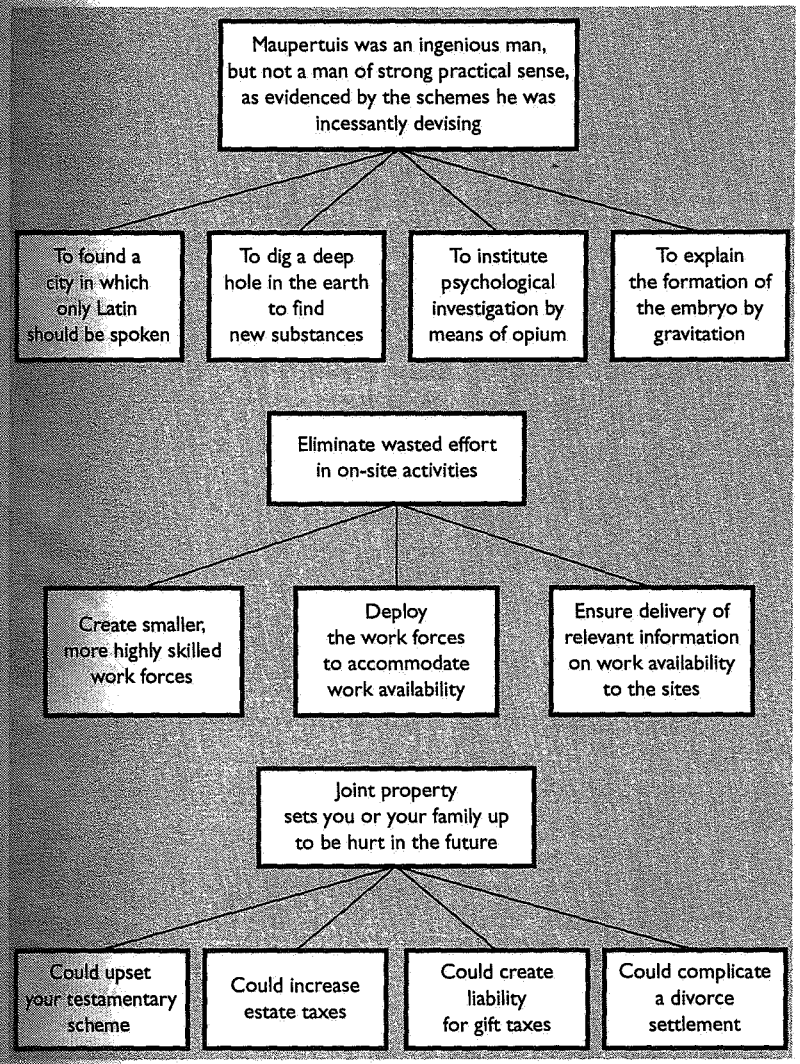
How It Works

The key technique is to find one word that describes the kind of ideas in your grouping. This word will always be a plural noun (a) because any 'kind of' thing will always be a noun, and (b) because you will always have more than one of the 'kind of' idea in your grouping. 'Warlike movements' is a plural noun in this sense, and so is 'preparations for attack.'

If you look at the inductive groupings in Exhibit 21, you will easily be able to see that each one can be described by a plural noun: schemes, steps, ways of hurting. And in each case again you can see that none of the ideas in any of the three groupings is a misfit; each one matches the description of the plural noun.

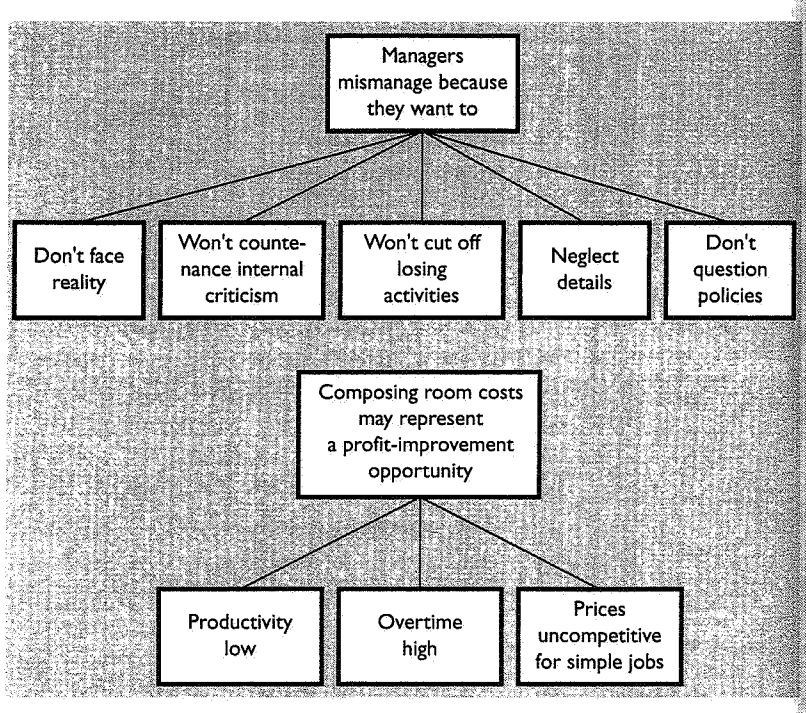
The next step is always to check your reasoning, and this is done by questioning from the bottom up. For example, if you see a man who wants to found a city in which only Latin should be spoken,

Exhibit 21 Clear inductive arguments



dig a deep hole in the center of the earth, etc., can you infer that this is an ingenious man, but not a man of strong practical sense? Yes, you can, or at least you could when the statement was originally written.

Exhibit 22 Poor inductive arguments



By contrast, consider the two examples in Exhibit 22. If you see managers who don't face reality, won't countenance criticism, etc., can you infer that they mismanage because they want to? Certainly not, it's sloppy reasoning and writing.

What about the next one? If productivity is low, overtime high, and prices uncompetitive, can you infer that you have a profit-improvement opportunity? Perhaps, but I can think of three or four other things that could also be labeled indicators of a profit-improvement opportunity. In that case, you know the overall point is at too high a level of abstraction in relationship to the three points grouped below, since it does not make a statement specifically and only about them.

In fact, however, this is really a deductive argument masquerading as an inductive one, as you may have remembered from the example in Chapter 3. The low productivity led to the high overtime, which led to uncompetitive prices. Whenever you have only one piece of

evidence for anything, you are forced to deal with it deductively. Thus, the point implied at the top is something like 'Our prices are high because our productivity is low.'

How It Differs

I'm sure you can see now how very different deduction and induction are, and how easily you can tell the difference. Remember, if you are thinking deductively, your second point will always comment on the subject or predicate of the first. If it does not so comment, you should be able to classify it by the same plural noun as the first, to test that you have a proper inductive grouping.

To demonstrate, I recently ran across two so-called deductive fallacies in a logic book, which went as follows:

All communists are proponents of socialized medicine
Some members of the administration are proponents of socialized medicine
Therefore some members of the administration are communists.

All rabbits are very fast runners
Some horses are very fast runners
Therefore, some horses are rabbits.

In both cases, I'm sure you will instantly be able to see that the second point does *not* make a comment on the first point, so these ideas cannot be deductively related. What the second point does do in each case is to add another member to the classification (plural noun) established in the first point. Placing ideas in classes is defining them by a plural noun, and you know that that is induction.

To test yourself, suppose I say to you:

- Japanese businessmen are escalating their drive for the Chinese market.

Can you pick which of the next two points relates inductively to this, and which one deductively?

- The fact that American businessmen will soon be entering the market is sure to stimulate them further.
- American businessmen are escalating their drive for the Chinese market.

Clearly the first is deductive and the second inductive.

Note that with inductive ideas you generally either hold the subject constant and vary the predicate, or hold the predicate constant and vary the subject.

For example, you could say:

- Japanese businessmen are escalating their drive for the Chinese market
- American businessmen are escalating their drive for the Chinese market
- German businessmen are escalating their drive for the Chinese market

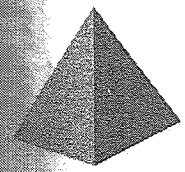
The smart money is moving into China.

or you could say:

- Japanese businessmen are escalating their drive for the Chinese market
- Japanese businessmen are escalating their drive for the Indian market
- Japanese businessmen are escalating their drive for the Australian market

Japanese businessmen are moving aggressively into Southeast Asia.

It is interesting to note that whether you couple the ideas to form an inductive grouping or the beginning of a deductive line of reasoning, your mind automatically expects either a summarizing statement or a 'therefore' point. This expectation of the mind for deductive and inductive arguments to be completed often leads the reader to project his thinking ahead, to formulate what he thinks your next point will be. If his is different from yours, he can become both confused and annoyed. Consequently, you want to make sure that he will easily recognize the direction in which your thinking is tending by giving him the top point before you state the ideas grouped below.



6

HOW TO HIGHLIGHT THE STRUCTURE

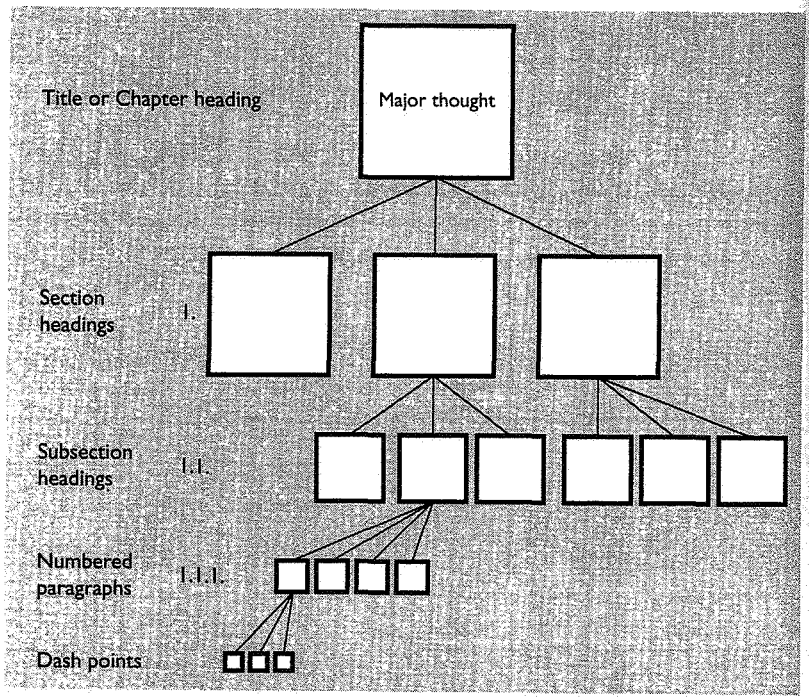
Once you have worked out the logic of your pyramid and are ready to begin writing, you want to be sure you arrange your ideas on the page in a way that emphasizes the various divisions of thought. In doing so, you will naturally reflect the hierarchical structure of the pyramid, as shown in Exhibit 23.

You can reflect this hierarchy in a variety of ways, the most common of which are headings, underlined points, decimal numbering, and indented display. Feelings run high about which of these is the 'best' formatting device. I myself lean to the use of headings as described below. However, in deference to what are excellent reasons given by proponents of the others, I discuss them as well.

Whichever format you choose, remember that your objective is to make comprehension easier for the reader. This means that the format must be applied properly to reflect the levels of abstraction in your argument. To give the desired appearance without the proper content can cause confusion.

To this end, you want to make sure you thoroughly understand the rules before you begin application.

Exhibit 23 Headings should reflect the divisions of thought



HEADINGS

Essentially, the technique is to place signs for increasingly subordinate ideas ever further to the right of the page (Exhibit 24). Thus, major ideas are capped with major section headings at the left-hand margin, divisions of these major ideas are capped with subsection headings, divisions of those with numbered paragraphs, and so on. Of course, the style of headings you choose need not necessarily follow this particular form, but whatever the form, each heading should represent a division of thought.

Because your headings will represent divisions of thought, their use should reflect the relationships between the ideas inherent in the pyramid. To this end, you will want to take care that you:

1. *Never use only one of any element.* Since the headings indicate levels of abstraction in the pyramid, you can never have only one item at each level. Thus, you can never have only one major section, or one subsection, or one numbered paragraph, or one dash point. Put more plainly, you shouldn't just stick in a heading because you think it would look good on a page, the way newspapers and magazines do, to break up the printing. A heading is meant to call attention to the fact that the idea it represents is one of a group, all of which are needed to understand the overall thought they support.

2. *Show parallel ideas in parallel form.* Since all of the ideas in a group are the same kind of idea, you want to emphasize this sameness by using the same grammatical form for the wording of each heading, etc. Consequently, if the first idea in a group of major section headings begins with a verb, all the rest must as well; if the first idea in a group of subsection headings begins with an 'ing' word, so should all the others:

   Appoint a full-time Chief Executive
   - To coordinate activities
   - To effect improvements

   Establish clear lines of authority
   - Regrouping hotels by support needs
   - Assigning responsibility for overseas operations
   - Removing Boards from the chain of command.

As you can see, because the subsection headings in the first group begin with the word 'To' does not necessarily mean that those in the second group must do so as well. Remember that there are invisible fences imposed between the ideas in each major section. Thus, the parallelism to be emphasized is between ideas in the subsection group, not between groups of subsections.

3. *Limit the wording to the essence of the thought.* The headings are meant to remind, not to dominate. Thus, you want to make them as concise as possible. You would not want, for example, to make the first major section heading above read 'Appoint a full-time Chief Executive to provide clear central authority.'

4. *Don't regard headings as part of text.* Headings are for the eye more then they are for the mind. As a result, they are not often read

Exhibit 24 Examples of Headings

1. THIS IS A CHAPTER HEADING

Chapter headings are numbered and centered, and should be worded to reflect the major thought to be developed in the chapter. The paragraphs immediately following a chapter heading (or title) should express the major idea clearly, as well as supply whatever other information the reader requires to ensure that you and he are 'standing in the same place' before you make your point and tell him how you plan to develop it. Subsequent chapter headings should be written in parallel style.

The major divisions of thought you plan to have may be set out with paragraph points or some other distinguishing mark:

- First major thought to come
- Second major thought to come.

THIS IS A SECTION HEADING

The wording of section headings should also reflect the idea to be developed in the section to follow, and the wording of the first should parallel that of the others. A section can be further divided either into subsections or, if the points are short, into numbered paragraphs. The principal ideas of the subsections should be introduced and may be set off with paragraph points:

- First subthought to come
- Second subthought to come.

This is a
Subsection Heading

These, too, should be worded to reflect the principal thoughts they cover, and expressed in parallel style. If you wish further to divide the thought in a subsection, you can use numbered paragraphs.

1. This is a numbered paragraph. The first sentence or opening phrase can be underlined to highlight the similarity of the points being numbered. The point to be made may require more than one paragraph, but you should try to limit the development of the point to three paragraphs.
   - This is a dash-point paragraph, which is used to divide the thought in a numbered paragraph
     - You seldom break an idea down as far as dot-points but when you do it looks like this.

* * *

Besides these devices for dividing thoughts, you might also want to use stars (*) and paragraph points (•). Stars can be placed three in a row, in the center of the page, to indicate that a concluding comment to a long section is about to follow (see above). The paragraph point (•) can be used to set out lists when the number of items to be included is less than five (for example, for the section headings listed above), or to call attention to a single paragraph that contains a point to be emphasized.

- These paragraphs should be written in block form, and kept as short as possible.

carefully, and you cannot depend on them to carry your message. Accordingly, you need to make sure that your opening sentence under a heading indicates that you are turning to a new topic. In fact, your entire document should be able to be read as a smooth-flowing piece without the headings. By the same token, you should never use the headings as part of the text.

For example:

Appoint a full-time Chief Executive

This action will go far toward clarifying the day-to-day responsibilities of . . .

This rule, of course, does not apply to numbered paragraphs, which *are* meant to be read as part of the text.

5. *Introduce each group of headings.* In doing so, you want to state the major point that the grouping will explain or defend, as well as the ideas to come. To omit this service is to present the reader with a mystery story, since he will then not be able to judge what the point is you are trying to make in that section until he gets to the end – and by then he may well have forgotten the beginning. For this reason, you should never have a major section heading begin immediately after the title, nor should you ever have a subsection heading begin immediately after the section heading.

6. *Don't overdo.* This is perhaps the most important rule of all. You want to use headings only if they are going to clarify your meaning – if they are going to make it easier for the reader to keep the subdivisions of your thought in his head. Often it is not necessary or useful to have any divisions below the major section headings.

If you formulate your headings properly, they will stand in the table of contents as a precis of your report – another extremely useful device for the reader in trying to come to terms with your thinking.

UNDERLINED POINTS

Another popular approach is literally to show the hierarchy of ideas by underlining the entire statement of the

support points below the Key Line level (Exhibit 25). Lower level support points are also stated in their entirety, but distinguished by form and indentation.

The purpose of this format is to provide speed and ease in reading. The theory is that the reader should be able to speed through if he wishes, reading only the major underlined points, and in that way comprehend the entire message.

Exhibit 25

REFLECT THE MAIN POINT IN THE TITLE

Write a paragraph or so for the situation xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxx xxxxx xxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxxx xxxx

Write a paragraph or so for the complication and the question. Sometimes the question is implied xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxx xxxxxxxx xxx xxxxx xxxxxxxx xxx xxxxx xxxxxxxxx xxx xxxxx xxxxxxxx xxx xxxx xxxxxxxx

State the main point. If the document is longer than seven paragraphs long, state the points on the key line:

- First Key Line point
- Second Key Line point
- Third Key Line point.

PUT A HEADING TO MATCH THE FIRST KEY LINE POINT

Write a short introduction leading up to and restating the main point. Again, if the section will be longer than seven paragraphs, state the points, centered, on the lines below, and then:

1. NUMBER THE SUPPORT POINTS, IN UPPER CASE, AND UNDERLINE, AT THE MARGIN.

   (1) Indent, Number in Parentheses, the Points and Underline, in Upper and Lower Case, at the Next Level.

      1. If the Document is Very Long, Number Without Parentheses, Indent, and Underline, in Upper and Lower Case, the Points at the Next Level.

         - Indent with a dot the points at the next level, capitalizing only the first word.
            - Indent with a dash the points at the next level, capitalizing only the first word.

While this is lovely for the reader, it can be a bit difficult for the writer, because it imposes some strict rules on him.

1. *You must be absolutely disciplined in applying question/answer logic.* Points below must directly answer the question raised by the point above, *and no more.* There is no room in this format for graceful liaisons of language or attempts at amplification. Such things destroy the clean, stark presentation of the logic. If you must amplify or give background, you will have to do so in the introductory or concluding paragraphs.

2. *You must be careful to word the points so that they state their message as sparsely as possible.* It destroys the ease with which the logic can be comprehended if the reader must wade through 30 words before he grasps the point. If you find yourself with more than a dozen words, or more than one subject and predicate, think again.

3. *You must be totally ruthless in limiting your points to the outline of your deductive or inductive argument.* Most people ignore this requirement and end up simply listing points, without regard to the niceties of either induction or deduction. You know that there are never more than four points in a chained deductive argument, and never more than five in an inductive one. If you find yourself going beyond that, the likelihood is that you have overlooked an opportunity to group, and should rethink what you are saying.

DECIMAL NUMBERING

Many companies, and most government institutions, like to use numbers rather than headings to emphasize the subdivisions of a document, and some go so far as to number every paragraph. This approach is claimed to have the advantage that any single topic or recommendation can be easily and precisely referred to.

However, frequent index numbers do tend to interrupt the reader's concentration on the content of the document, or on any section of it, as a whole. In addition, they have a distinct practical disadvantage, in that any amendment to the finished copy that eliminates a paragraph or so could necessitate the renumbering of all subsequent paragraphs. Not a pleasant thought for your secretary, even with word processing.

If you decide that you prefer to have numbering because of its value as a quick guide, you would probably be wise to use it in conjunction with, rather than as a replacement for, headings. The headings have the value of enabling the reader to pick up the gist of the ideas quickly as he reads. And they are quite useful in refreshing his memory if he finds he has to go back to the document several days after his initial reading.

In addition, you will usually find that saying 'In Section 4.1 on manufacturing profits...' is clearer as a reference in jogging someone's comprehension and thinking than is saying only 'In Section 4.1...' In the former case, the person has the general idea in mind as he turns to the specific reference; in the latter, he must get to it before he can begin to think about it.

The excerpt shown in Exhibit 26, from the opening of Chapter 5 of Antony Jay's fine book, *Effective Presentation* (or *The New Oratory*, as it is known in the United States), illustrates the way you want your document to end up looking if you use the headings/number form.

What numbering system should you use? This one is very common:

I. There is no other animal that will suffer to the death to aid its master as will a dog
   1. Other animals will run when danger nears
      a. The dog will remain
         i. Even though it might mean death.

This one is probably simpler to use:

1. There is no other animal that will suffer to the death to aid its master as will a dog
   1.1 Other animals will run when danger nears
      1.1.1 The dog will remain
         1.1.1.1 Even though it might mean death.

These examples show the relationships of the numbered levels to each other, rather than the actual form they should take. The form, as Exhibit 23 indicates, should reflect the actual divisions of thought in the piece of writing. Accordingly, you would not number the paragraphs in initial introductions, in concluding summaries, in linking comments, or in the introduction to subpoints.

Exhibit 26 Example of using headings and numbers

5 DELIVERY AND THE USE OF WORDS

Should the presenter have a written script, or just talk more or less spontaneously from a few notes? This is a constantly recurring question, and one to which more people come up with the wrong answer than any other.

To start with, let us agree that the best talker is the most natural. He is easy, fluent, friendly, amusing and free from the fetters that seem to bind others to small pieces of paper. He is just talking to us in the most natural way in the world: no script for him - how could there be? He is talking only to us and basing what he says on our reactions as he goes along. Such a talk cannot by definition be scripted.

5.1 THE PROBLEMS OF UNSCRIPTED PRESENTATION

For most of us, however, that sort of performance is an inspiration rather than a description. Our tongues are not so honeyed, and our words are less winged. And even for those who can on occasions touch those heights, there are three difficulties.

5.1.1. Visuals

A brilliant talker does not need visual aids to stop the audience from falling asleep, but the subject of a presentation very often demands them. And if you have them, it can be fatal to depart from the prepared order in which they are to appear. The slides and flip charts are in prearranged sequence, the operator has a fixed point at which to leave the slide machine and go outside to the film projector, and a brilliant extempore performance will mess the whole thing up.

5.1.2. Time

A presentation is almost always limited in time, and a certain amount has to be said in that time. Without fairly careful scripting, time is likely to be wildly overrun, or important points omitted.

5.1.3. The best way

If you accept that certain points have to be made in a certain time to a certain audience, the logic of optimization takes over. There is a best order in which to make the points. There is a best way of putting them to make them clear to the audience. There are best words and phrases to emphasize your arguments. Quite soon you discover that any genuinely spontaneous performance is not practicable, so it might as well all be scripted.

Most people get to this stage, and this is where it all goes wrong. They sit down at their desk, write out what they want to say, hand it to their secretary, and tell themselves that they have written their presentation. But they haven't. They have written a paper.

5.2 DON'T READ THEM A PAPER

I am not sure why it should be slightly offensive and insulting to have a document read to you, or obviously memorized and recited at you, in this sort of situation. Eminent professors read papers to learned societies, and no one complains: but in that case the audience are usually receiving (or hope they are receiving) a privileged preview of a new contribution to knowledge which will later be published...

INDENTED DISPLAY

Sometimes your document will be so short that neither headings nor decimal numbering would be appropriate to highlight the divisions of your thinking. Nevertheless, you will still be dealing with groupings of ideas, and you will want to highlight them in some way.

Groups of points supporting or explaining an overall idea are always easier for the reader to absorb if they are set off so as to be easily distinguishable as a group. Consider, for example, the two versions of the memorandum shown in Exhibit 27.

Exhibit 27-A

I have scheduled a Creative Thinking session with Frank Griffith and the industrial engineers for the second week of September, and for Al Beam and his staff for the third week of September.

I think we need just a few slides to supplement the introduction, which is attached with suggested slide concepts.

We also need slides of the Specific Examples of Positive Reinforcement language. These slides would be used as a wrap-up at the end of the presentation. This language should also be in printed form to be used as a handout.

Slides showing the results of innovation we have had, such as the slides that you made of the musical instruments, would be quite valuable for the Frank Griffith meeting for the second week, and they would be essential for the Al Beam meeting set for the third week of September.

We have purchased the film 'Why Man Creates' to be used as part of the introduction of the program.

Slides are also needed for the section on Innovation Environment Chart Traits.

The first version is perfectly clear as it stands; but the approach used in the second version makes the points literally 'jump out' at the reader.

Exhibit 27-B

I have scheduled a Creative Thinking session with Frank Griffith and the industrial engineers for the second week of September, and for Al Beam and his staff for the third week of September. For both these meetings I will need slides showing:

1. The major points made in the introduction. Suggested concepts are attached.
2. Specific examples of positive reinforcement language. These slides would be used as a wrap-up at the end of the presentation. This language should also be in printed form to be used as a handout.
3. The results of innovation we have had, such as the slides that you made of the musical instruments. These would be quite valuable for the Frank Griffith meeting, but essential for the Al Beam meeting.
4. The steps needed to create an environment for innovation.

In general, the major rule to remember when you set your ideas off in this way is that you want to be sure to express them in the same grammatical form. Not only does this usually save words and make the ideas easier to grasp, but it also helps you to check whether you are saying clearly what you mean to say. Arranging the ideas in this way in Exhibit 27-B, for instance, shows up the fact that the author has not stated what kind of slides he wants for the section on Innovation Environment.

Whether the memorandum is long or short, the visual arrangement of groups of ideas to set off their similarity to each other as ideas will always make them easier to comprehend. As with headings, however, one set of indented groupings per memorandum is enough; otherwise the visual effect is lessened.

All of these devices serve as visual aids to the reader. They are meant to display to the reader's eye the logical relationships with which his