

# STUDY SKILLS



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# INTRODUCTION

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Avoiding Plagiarism from *Academic Writing*

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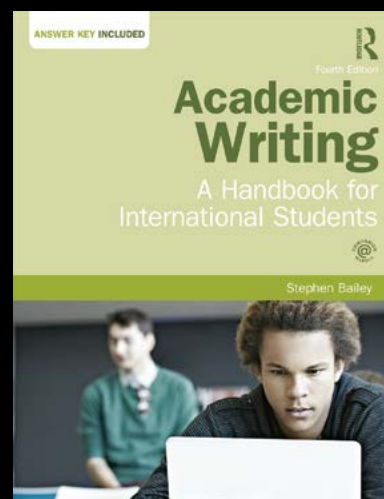
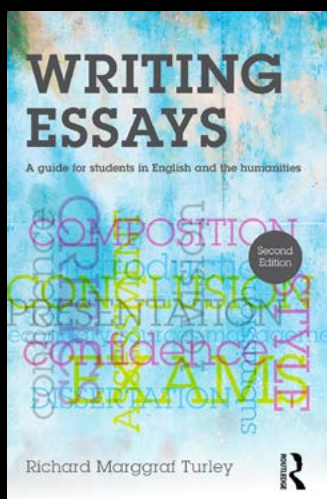
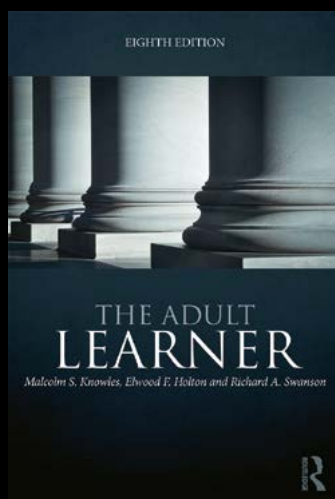
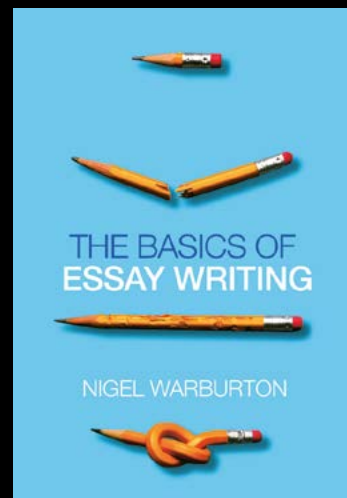
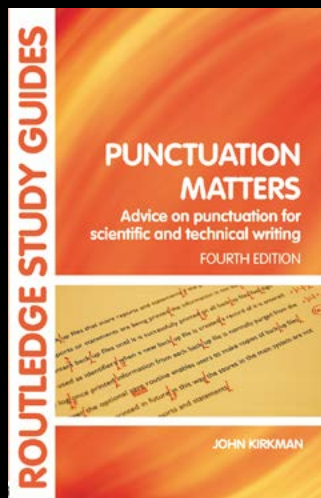
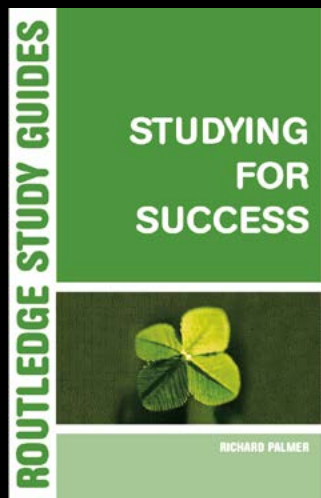
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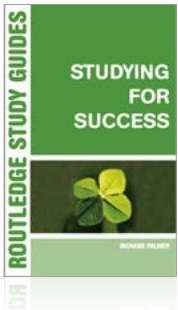
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# EFFECTIVE READING

# 1 :: EYES RIGHT: EFFECTIVE READING

RICHARD PALMER

The following is excerpted from  
*Studying for Success*



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## Richard Palmer

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Sir, do you read books *through*?

(Samuel Johnson)

## PRELIMINARY

Dr Johnson devoted his life to books, learning and words; it is therefore hardly likely that he intended the above remark to encourage mere dabbling in his own books or anyone else's. Quite the reverse: his incredulous question was inspired by the knowledge that if a book is at all worthwhile, it will both need and stimulate several visits.

It needs to be stressed at once that he was talking – as am I – about 'serious' reading rather than 'casual' reading for pleasure. To start at point A and go through to point Z is a perfectly viable way to read a good thriller or a holiday novel; one could argue that such works can only be read that way, partly because one rarely feels the need or desire to return to them. But the reading you do as part of your course is intensive and central – it is material that you have to absorb deeply, and learn. In those circumstances, to rely solely on that 'A to Z' method is rarely effective, chiefly because

**If a course book is worth reading, it's worth reading twice; moreover, if you want to get some thing substantial out of it, it must be read at least twice, and probably a lot more.**

Your criterion is mastery, or at the very least intelligent digestion of a book's contents, in terms of both its main arguments and its details. That cannot be achieved at one go – not even in the case of brilliant students reading something they're instinctively and pleasurably drawn to. Indeed, this guiding principle has, I believe, the status of fact:

**On any first reading, your chances of digesting more than 40 per cent are slim, regardless of the amount of time you spend on it.**

I shall return to that observation shortly. First, however, we need to be clear exactly what is meant here by 'read'. So let us begin by considering a few popular misconceptions about reading, especially those that have a bearing on 'slow readers'.

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## SIX MISCONCEPTIONS

### MISCONCEPTION I : 'IT IS ESSENTIAL TO READ EVERY WORD'

Though not entirely untrue, this can all too easily become a recipe for painfully inefficient and dispiriting progress.

Like a number of ideas that are unhelpful to advanced study, the notion is a hangover from our primary school days. Please do not think that I am casting scorn on those ideas as such: they are right for the people they serve – young children acquiring completely new skills. A child learning to read must focus fully on each individual word: how else can s/he build a vocabulary and develop a functional sense of grammar? But once you are into your teens, with a vocabulary that runs into five figures and a by-now automatic grasp of how sentences work, it makes no sense at all to abide by practices which are out of date for you. In the case of reading, this wouldn't matter if such methods were still useful, but they aren't. Consider, for example, this sentence:

**The man in the wine-splattered raincoat tripped over the sleeping dog and crashed into the dustbins.**

No word is unfamiliar, and no vocabulary problem exists. It is not a difficult sentence: it describes two simple actions, and, though quite dramatic, makes no excessive demands on either our imagination or sense of logic.

However, if you are someone who 'reads every word', you're going to find that sentence fairly laborious: after all, it contains seventeen separate words. Now think of using such a method to read a 30-page chapter, bearing in mind that most books average about four hundred words a page! That is a daunting task: all those separate words – tens of thousands of them per half-hour session – will not only slow you up appallingly but also force you to work doubly hard reconstituting them into meaningful grammatical constructs.

If like most people you've received no instruction in reading since the age of 8, you may be growing somewhat puzzled. The key to what I'm talking about is an understanding of the way the eye works.

To set up that enquiry, and to demonstrate why 'reading every word' is a poor method, let us consider another misconception.

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## MISCONCEPTION 2: 'FAST READING IS UNNATURAL/ BAD FOR THE EYES'

The human eye is an astonishing instrument, but it must focus in order to translate the image for the brain. To focus, it has to come to rest or fix on an object: it cannot track a moving object unless it is able to focus on each stage of movement. You can demonstrate this for yourself via a simple game with a couple of friends.

Get them to focus on your index finger, which you should at first hold in front of their faces at a comfortable distance. Then ask them to go on focusing as you move it slowly to one side and then the other, and watch their eye movement. You will see that it is possible for them to 'track' your finger movement only if they move their eyes at the same rate, constantly adjusting in order to maintain focus.

Words on a page are, of course, static; but, put together in the form of sentences and paragraphs, they occupy a breadth of space which requires the eye to move in order to absorb them all. The laws of its focusing powers, just described, mean that the eye must keep stopping, however briefly, to take in each separate static construct. More comforting is the fact that it has an extremely impressive rate of focusing. All human beings are capable of focusing on four things per second

That means, if you 'read every word', you can take in four words per second. But that is the least you can do, not the most: there is no reason why each of those four foci per second cannot take in several words at a time. With nothing more gimmicky than alert concentration and a sense of how sentences are actually written, you can make your reading not only faster but much more efficient.

The forthcoming section addresses in detail how to bring that about; first, let's nail forever the myth that fast reading damages the eyes, which is as worthless as the related old-wives' drivel about the harmful ocular effect of watching too much television. The eye is, first and foremost, a muscle: like all muscles, it is the better for being used often and used efficiently. Speed-reading cannot increase your rate of focus beyond that optimum of four things per second; it can, however, greatly increase your breadth of focus, without putting any additional strain on the eyes whatever. Indeed, because it makes reading more enjoyable and more satisfying, it could be said to reduce eye-strain – if only because you can finish so much quicker and thus give your eyes an earlier rest.

## MISCONCEPTION 3: 'VERY FAST READING SPEEDS ARE IMPOSSIBLE'

It is said that the late President Kennedy could read state documents and official memoranda (items not noted for the elegance or easiness of their prose) at a speed



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of 1,200 words per minute. Most people – including the author of a book on reading – have poohpoohed this as impossible, and concluded that such a spurious claim was the invention of Kennedy’s image-building team.

Well, 1,200 words per minute (wpm) is a lot, I agree; but there is no reason to dismiss it as fantasy. I know several people whose reading speed is at least 1,000 wpm and many others who have trained themselves to go far beyond the 500 wpm that is popularly assumed to be the absolute ‘ceiling’. How do they manage it?

Remember that sentence I gave you?

**The man in the wine-splattered raincoat tripped over the sleeping dog and crashed against the dustbins.**

Anyone determined to ‘read every word’ will, in effect, re-punctuate the sentence as follows:

**The. man. in. the. wine. splattered. raincoat. tripped. over. the. sleeping. dog. and. crashed. against. the. dustbins.**

That looks ridiculous, of course. But it’s precisely what you’re doing if you focus separately on each individual word – a method that is, I regret to say, exactly that of the toddler grappling with

**The. cat. sat. on. the. mat.**

Such a parallel is all the more humiliating when you remember that, unlike the toddler, you now possess a sophisticated sense of grammar. In other words, you know that sentences consist of words that build on each other and make sense as groups or sets. For that is what grammar is, finally – nothing more (nor less) than a system that enables and promotes clear understanding.

Not only is this impressively faster: it is also more intelligent. By reading concepts or intelligible groups of words rather than mere isolated nouns, verbs, adjectives and so on, you are immediately in tune with the writing’s basic design and the logic of the writer’s thoughts. Thus you will get the point of the writing much more quickly: in addition to the increase in speed with which you cover the text spatially, you are greatly accelerating your understanding. To sum up: very fast reading speeds are not impossible. You can do wonders to your own speed once you learn to read in ‘sets’; indeed, you can increase it sixfold:

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- You will cover the print at – conservatively – three times the rate available to you if ‘reading every word’.
- You will then double that speed by virtue of a much-improved conceptual grasp of the writing’s direction.

To be sure, there will be times when the structure and vocabulary you encounter will be much more complex than the example I have used, and this will inevitably slow your rate down. Even at its least successful, however, I can promise you that the method I’ve outlined will make a dramatic difference. There is no reason why you should ever be a ‘slow reader’ again, no need to ‘read every word’ in a non-literate, plodding fashion. Speed reading is within everyone’s capabilities; as an automatic corollary, so is speedier understanding. And for any casual reader, let alone the serious one, that is always the chief goal.

### MISCONCEPTION 4: ‘SKIP-READING IS LAZY AND DISHONEST’

It depresses me how often I meet this attitude: it smacks of sterile puritanism, and also displays a basic ignorance of how people learn. Provided it is not the only method you adopt, and provided you do not imagine you can achieve full understanding by it, ‘skip-reading’ is a sensible and productive practice for any student who has a large reading load. Its charm and effectiveness are twofold:

1. It enables a useful preliminary reconnaissance of new material.
2. It supplies a welcome break from the kind of concentration required during more ‘orthodox’ or severe reading activity.

‘Skip-reading’ is a vague term that can mean all things to all men and all women. My use of it is fairly elastic, covering every thing from a ten-minute flick through a 300-page volume to the more measured practice of ignoring the odd chapter. In short, I mean any kind of coverage that departs from the A to Z, read right-through method.

The value of skip-reading is that it allows you to acquaint your self quickly with aspects of a book and/or its essential territory. Under no circumstances should it be undertaken as a substitute for ‘full’ reading; as an accompaniment to it, however, it can prove very valuable as a consolidatory exercise or a launching one.

I stressed at the outset that any serious reading is going to have to be done at least twice. It makes sense, therefore, to make your first look at the material a brief and general one. If the volume/chapter/article has an introduction and/or interim summaries, read those first, as well as casting your eye over the rest of the material.

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This will help you to establish from the start a sense of what the stuff is about. In turn, that will make your eventual 'full' reading more knowledgeable, and thus more confident and alert. Naturally, you don't *have* to do this. I find it works for me: perhaps it suits my temperament, or maybe it's just that I've always done it, and the habit is now an efficient one. I can also say that it's helped a lot of my students. But if you don't want to skip-read, preferring to get the laboriousness out of the way early on, that's fine: it's no part of my intention to impose unsuitable or disagreeable techniques on you. As I've emphasised from the very first page of this book, you are in charge, and what best please you will be your likeliest route to success. But do not despise skip-reading, or, even worse, cultivate a sense of guilt or moral disapproval over it. It is no more shameful than it is useless; and if you find it helpful, then go ahead and do it

## MISCONCEPTION 5: 'I'D LIKE TO READ MORE BUT DON'T HAVE TIME'

I'm afraid that such a remark is, in at least 95 per cent of cases, pure drivel. Nearly all of us always have time to read more. If we don't do so, it's because we can't be bothered, or (more kindly) because we're too tired or sluggish to feel capable of taking on something as demanding as a book. This is normal and not in the least shameful, but it is an excuse, and as such is always suspect. There are, it is true, some people who genuinely can't read as much or as often as they'd like to. The point is, though, that they are not students! Or, if they are, they must do something about such a time problem. Any advanced study demands a lot of reading be it science, humanities, languages or more practical courses such as education diplomas or architecture. All the prospectuses I've ever read make this abundantly clear from the start, and if students find that their reading load is getting difficult to cope with, there are only two possible reasons. Either:

They're reading unnaturally slowly.

or:

2 They're doing too many other things.

Any attempt to put the blame for your non-reading on your 'impossibly busy life' really won't do. If you're advised to read things for your course and you don't do so, it's *your* fault. 'I haven't had the time' is a classic euphemism for laziness.

Very few teachers or lecturers will give you a bad time if you trot out this stale piffie, because, frankly, they see no reason why they should chase you to do work you've taken on voluntarily. It's your problem, not theirs, and if you advance the absurd claim

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that you're so vitally occupied that you'd need a 28-hour day to accomplish all you've been advised to, you can't expect more than a weary grimace/ grin in response!

## MISCONCEPTION 6: 'SLOW READING FACILITATES MEMORY'

In a way, I've already covered this in my look at the 'reading every word' syndrome. But the fallacy needs separate examination – partly because it seems so reasonable and wise that many can be seduced by it. We've seen, in Chapter 2, that the brain's natural (and therefore most efficient) span covers between 20 and 35 minutes (page 25). We have also seen that recall is usually instant or else not forthcoming at all. In view of this, it is hardly likely that a slow-moving attempt to commit things to memory is going to be more successful than one which is faster and more energetic. But we do not have to rely on such general logic: it can be demonstrated in a clear and concrete way.

Find two pieces of writing, about the same length. They should, ideally, be pieces you haven't read before, although something you've vaguely looked at once will suffice. Preferably, your two pieces should either be about the same subject, or else about two subjects that you feel equally comfortable with (or equally uncomfortable!). If you like, two separate pages or sections of this book will do very well. Then:

1. Read the first piece as slowly as is natural for you. Don't read it more than once; but don't go on to the next sentence until you're confident that you've understood the previous one.
2. Take a few minutes' break.
3. Now read the second piece as fast as you can while retaining an intelligent sense of it. Look it over again, once and very quickly.
4. Take another few minutes' break.
5. Finally, get a piece of paper and write down all you can remember about Passage 1, and then about Passage 2 (if you prefer, get a friend/member of your family to 'test' you on each passage).

I would be very surprised if there is much difference between your two performances; moreover, I wouldn't be surprised if you did slightly better on Passage 2 than Passage 1. Most of all, I'd be amazed if the (say) five minutes you spent on Passage 1 resulted in you remembering five times as much of it as you did of Passage 2, which you read in a minute. For, to remind you of an earlier observation:

**On any first reading, your chances of digesting more than 40 per cent are slim, regardless of the amount of time you spend on it.**

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If the material is at all stimulating, your mind needs some time and some room to come to terms with it. You can *imagine* you've understood a sentence, but by the time you've read three or four more sentences, it is likely that, although you retain an *impression* of that sentence which is enough to enable you to understand the subsequent ones, your 'absolute recall' of it will already be partial. You will, with slow, methodical reading, acquire a sense of the overall shape of the material, plus some individual points and ideas. But you can achieve that kind of grasp with the much faster method I've outlined; so why waste time and energy? You're going to have to read all your study material again anyway, however slowly you cover it the first time. Doesn't it seem sensible to deal with the first stage as efficiently (i.e. quickly) as you can?

I wouldn't be writing this book, let alone this chapter, if I were unsympathetic to 'slow' readers. What I do want to banish is the idea that there is anything virtuous or intrinsically profitable about slow reading. As I hope I've demonstrated in principle, it is relatively easy to increase your reading speed. What stops people from trying is that they feel either suspicious of fast reading or cosily orthodox about the funereal rate they adopt, or both. Once you've escaped that trap, once you have acknowledged that slow reading is like a headache – not only does it have a clear cause, but it can be easily cured – you are ready to try experimenting with specific speed-reading techniques, three of which we turn to now.

## SPEED-READING TECHNIQUES

### 'DIGITAL TRACKING'

This method has been well known for some time, and it is quite straightforward, although not everyone will find it easy. What you do is this:

1. Take your index finger – it will probably help if the nail has not been bitten down to the quick! – and place it directly under the first word of the passage you are about to read.
2. Then read as fast as is comfortable, using the tip of your finger as a 'tracker' – as if it were underlining everything as you read.
3. Continue until you feel your concentration ebbing. Take a short rest, and then go on in the same way, taking rests as and when you wish.

The idea here is to intensify your focus and thereby your speed. Digital tracking increases your attention by physically targeting it, just as underlining or italicising

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words when writing draws attention to their importance and (presumably) makes them more memorable.

Many people have found this technique a great help, and it is certainly worth trying. I nevertheless have two reservations about it:

1. It can be extremely tiring – just as underlining whole chunks of prose soon becomes arduous. It requires considerable discipline – no bad thing in itself, of course – which can quickly take its toll. That is why my above description mentions the need to rest as soon as you feel the need.
2. Some people – myself included – find such finger-tracing irksome and distracting. For a start, you have to be digitally accurate, otherwise you simply cover up the lines rather than highlight them! More fundamentally, the physical act of tracking can cloud the cerebrum – that part of the brain that decodes signals and makes sense of (among other things) words. In short, the additional motor activity that tracking involves can blur focus rather than assist it.

No single speed-reading technique will work for everybody. If the above is the answer for you, excellent. If not, try this next, which was recommended to me by a very bright Malaysian student I met many years ago.

## 'THE S-PLAN'

I admit in advance that at first sight this one seems seriously crazy! But try it: I can report that many have found it a remarkably effective method, although I ought to stress that it is best used during the first reading of material to be learnt. In addition, it is entirely unsuitable for the reading of novels, or indeed any kind of creative literature.

What you do is very simple – although, again, that does not mean it is easy! You fix your eye on the top right-hand corner of the page, and then allow your eye to sweep down the page in the rough form of the letter S:



I'll be surprised if you don't get the giggles the first couple of times you try this – I certainly did! But once you've settled down, you should find that a surprising amount of what you take in makes a lot of sense.

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Let's assume you're reading a closely-argued article, or a chapter from an academic textbook. As your eye describes its snake-like 'S' pattern, a number of words or concepts are likely to come repeatedly into focus. If this happens – and on average it does so eight times out of ten – the probability is that those instances are *key words*, central to the concerns and arguments at issue (see Chapter 7 for more on this concept). Thus you stand a good chance of picking up a working idea of the territory and its main features – which is all you can sensibly hope for on any first reading. The advantage here is that it will have taken you about a quarter of the time a rapid 'full' read takes, with very similar levels of retention and overall awareness.

As I've just implied, there will be pages that are rendered mere gibberish by such a method – maybe up to 20 per cent. But the 'positive' figure of 80 per cent is not to be sneered at; in addition, as you get more experienced, you can widen the 'band' that the S incorporates, thus increasing the likelihood of hitting upon rapidly intelligible material.

The final 'plus' of this technique is that it's *fun* – hence those initial giggles. And as I've been advocating from the very beginning, anything in study that increases your sense of enjoyment is going to increase your chances of success.

## PALMER'S 6-POINT PROGRAMME

This has nothing to do with the '6P Principle' I outlined earlier (page 32). Instead, it is a system which at its most successful enables you to read a passage six times more efficiently and also actually quicker than one A to Z reading. As with the S-plan outlined above, it is not suitable for any kind of creative literature. Advice on how to speed-read such works can be found in Appendix II (pages 210-12). Unlike the S-plan, however, the 6-point programme is useful at any time – the first reading, the second, and all subsequent ones right up to final revision. It is, I hope, tailor-made for mastering textbooks, discursive essays, articles, and all forms of coursework.

The programme is based on, or approximates, that delightful and apparently casual activity known as 'browsing'. If we pick up a book that looks interesting – in a bookshop, a library, a friend's house – the following behaviour-pattern occurs:

**Just about the only thing we don't do is start at Page 1 and read from there. Instead, we read the blurbs on the back and inside covers; we look at the index; we flick through the pages once or twice, often stopping if a picture or diagram catches our eye.**

My programme extends that natural approach into a system.

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Let us assume you have to read 30 pages of closely argued analysis (the subject matter is more or less immaterial). You:

1. Read the headings, subheadings and (where appropriate) chapter titles.
2. Read the introduction, the conclusion, and any interim summaries there may be.
3. Read/ peruse any graphs, illustrations, diagrams and tables.

That will take five minutes at most, and in response to possible questions such as 'So what?' or 'Why bother?' I would observe that:

Those five minutes provide an immediate sense of the overall shape and focus of the material, sketching out the terrain you must later cover in detail.

The text is no longer alien: you are ready to do some real reading something that is not actually true when and as you pick up the stuff for the first time. Then:

4. Read the first and last sentences of each paragraph.
5. Fill in the remaining gaps: that is, read it through now in the 'normal' A to Z fashion.
6. Review and clear problems.

Let's look at all six points in proper detail.

As noted, strands 1-3 make a virtue and a system out of everyday 'browsing' behaviour, making the initial reconnaissance less random and better focused. After these few minutes, you have acquired a grasp of the author's preoccupations, the direction of the argument, and the broad issues dealt with. You are now ready and sensibly equipped to dig deeper.

Point 4 is the oddest and most controversial. Some students have rebelled at it at first, arguing that 'fiddling around' with paragraphs in such a fashion actually wastes time, and is an irritating distraction. This can be the case, I agree; but, much more often, I have found it enormously useful. For if you overcome its initial strangeness, the practice offers two benefits: it is a fine concentration exercise, and it also feeds you a great deal of information at considerable speed.

How? Get hold of a paragraph. (Any will do, provided it's adequately written.) Read it through in an 'orthodox' way. If the writer has any idea what he's doing, you will see that it follows a logical, even predictable, pattern. A paragraph, after all, is an



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argument in miniature: it introduces a topic, explores it, and then draws a conclusion. So one can assume that if one reads the beginning and end of such a paragraph, it should be possible to make at least an 'educated guess' at the content and direction of the material in between.

That's how the 'fourth strand' of the programme works. Provided you concentrate hard, and are not tempted to scan anything but those first and last sentences, your mind will automatically be drawing inferences and filling in the gaps for itself. So you can flit from paragraph to paragraph at high speed, while your brain estimates the likely nature of what you're missing out.

Of course, there will be times when those 'educated guesses' are inaccurate. At this stage in your reading, you are only getting to know the material, not mastering it, and it's inevitable that you will sometimes fail to take account of a point that appears in the middle. But even that is a help: the surprise you will feel at the subsequent discovery shows how far you've progressed already. For, even before arriving at point 5, where you read the text 'normally', you are now reading it critically. That is, you are reading with certain expectations, a sense of where the writer is going and the 'stops' s/he will be visiting along the way. Encountering an unscheduled (= 'unguessed') stop will be beneficial either way: the writer's detour may be fruitful, or it may be unjustified. Whatever the case, your understanding of the material will have been considerably increased.

I should add, finally, that this technique cannot always be used for the simple reason that some authors produce paragraphs that only have two sentences altogether! Stinginess of this kind is not necessarily bad writing: I've seen several excellent science textbooks that use such a method to aid clarity. Usually, though, good professional authors organise their paragraphs in a standard fashion, and that means you should be able to pursue point 4 without undue trouble.

Point 5, as already outlined, restores you at last to the normal A to Z method of reading. But there's a big difference from those times when you have adopted that procedure from the very start. Now you have a strong sense of what you're about to read. This not only means that you will cover the ground much faster: it also means that the various points and ideas will register much more definitely. Furthermore, there's an important by-product: you will enjoy the 'full read' much more. Your confidence will be higher because you know what the stuff is about, and you will also find it pleasant to have a dialogue with the text rather than have to plough submissively through it.

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Point 6 is a kind of 'mopping-up operation'. The first five readings should ensure an impressive rate of absorption, but there will be gaps, especially if this is the first session you've had on the material. Now you should read it through again (A-Z style), actively looking for anything you've missed altogether or remain somewhat hazy about.

Using this method, you will spend less time than you would on a once-through 'standard' read. You will still need to return to the material again at some stage, probably more than once; but you will have given yourself an efficient start that will make all future reading more agreeable.

I cannot claim that this system works for everyone, although I can say that it has proved a considerable help to over half the students I've given it to over the years. As implied earlier, some people find Point 4 more trouble than it's worth, and prefer to 'double up' Point 5 – i.e. read the whole thing through twice in an orthodox fashion. However, even when it proves less than fully successful, or even a failure, one benefit almost invariably accrues a belief that speed-reading is possible, and that a personally suitable technique can be found somewhere or invented some way. As with everything else, you are in charge: if you want to read faster, you will eventually hit upon a productive way of doing so. As a final incentive, let's take a look at an experience that often characterises the first reading of a textbook chapter. If you're an 'orthodox' or 'normal' reader, I'll be very surprised if you don't recognise this little scenario.

**You pick up the book, find the chapter at issue and start reading. All may be well for a while; but by the time you're into the second page, things are getting rather foggy. You struggle on, reach the end of the page – and then, suddenly, you realise about half-way down your third page that you've hardly taken in a thing. Not only have you lost your way: you can't even remember what territory you're in or what the map suggested.**

Familiar, is it? Well, be comforted: it happens to every reader sooner or later, and quite frequently too if we're not careful. But it is a dispiriting and energy-sapping phenomenon that is trebly annoying:

1. You've utterly wasted the first five or ten minutes of your study session – all the more galling in that such a time should find you at your freshest and most alert.
2. You will have to do it again – which almost feels like a punishment for 'bad work'.
3. You will feel stupid and inefficient – hardly conducive to the confidence that underscores successful study.

# 1 :: EYES RIGHT: EFFECTIVE READING

RICHARD PALMER

Point 3 is an over-reaction: such an irritating episode does not prove that you're a slow-witted dolt. It is the *system* that is at fault, not your brain: the only stupid thing you've done is adopt such a method in the first place. Much better to use any of the 'skimming' methods outlined earlier, using those first ten minutes to acquaint yourself with the general shape and outstanding features of the material. You will benefit twice over – by making an efficient and confidence-boosting start, and by avoiding all the 'negative waves' that I've just diagnosed!

## SUMMARY: SPEED-READING AND PREJUDICE

A great many people are suspicious of speed-reading theories: I was myself for quite some time. My dislike sprang from those gimmicky and fatuous advertisements that still leer at us from newspapers, whose hard-sell cannot long disguise the inadequacy of the techniques advocated. It wasn't until I read some sensible and honest work on the subject that I was persuaded that anyone can learn to read fast and efficiently and that it's very important to acquire that skill. In conclusion, here's a list of 'key findings'.

1. Surprisingly, moral prejudice has a lot to do with people's suspicions. They regard reading as a serious, even 'holy' activity, and therefore they resist the idea that it can or should be made easier. That attitude has a certain naive charm, but finally it is just silly. If you take books seriously, you surely want to get as much out of them as you can, and in view of that, to imagine that there is one 'correct' way of reading is no more sensible than to fancy that there is a 'correct' way of working. It's just you and the book: nobody else and nothing else count.
2. Speed-reading is physically good for you, whatever old wives may say. The more vigorously and efficiently you use your eyes, the fitter they will be. They will get much more tired if they plod laboriously through a text that the brain finds opaque and joyless.
3. The notion that speed and glibness are somehow synonymous is damaging and false. Ponderous people are rarely bright or interesting: might it not be that their dull superficiality is the *result* of their slowness, rather than the paradox it seems?
4. The brain and the memory work awesomely fast; they also work best for comparatively short periods of time. The more you can do during that time, the more likely you are to retain it. Time and again, our experience shows that it is not necessarily the people who take the longest over a task who do it best, but those who approach it with energy, enjoyment and a brisk clarity of purpose.

# 1 :: EYES RIGHT: EFFECTIVE READING

RICHARD PALMER

5. Serious reading of any kind is a gradual process, in the sense that full understanding can never be immediate. Speed-reading acknowledges this more sensibly than the narrowly dogged approach. Anything worthwhile requires several readings before it can be mastered: the decision to make most of them as rapid and pleasant as possible is not a dishonest short-cut but a properly intelligent way of bringing that moment forward.
6. There is nothing virtuous about being a slow reader; more important, there is nothing natural about it either. Slow readers are slow because they lack sufficient understanding both of the material itself and of how eye and brain work best, because they've been poorly trained, because they are imprisoned by certain silly myths, or through a mixture of all those things. If you want to read faster, you can; and I can promise you that you'll enjoy the activity more.
7. Books are going to remain centrally important to our culture in general and student life in particular, whatever further developments there will be in computing, information technology, email and all the rest of it. Because those latter phenomena have acquired such currency and appeal, however, the skills involved in reading have become, if not sidelined, less high-profile than a generation ago; I would certainly say that students nowadays have an even slower 'orthodox' reading speed than pertained when I first became interested in speed reading a quarter of century ago. That is not, of course, to argue that today's young are any less bright or diligent than their forebears, but it does suggest that efficient and discerning reading is perhaps a more crucial skill than ever before. In any event, I would argue even more fiercely than I did in this book's original incarnation that:

**You will almost certainly need a speed-reading technique that suits you if you are going to cope with your reading load, let alone achieve anything approaching mastery.**

I hope the ideas and techniques I've covered go some way to helping you do that.

CHAPTER

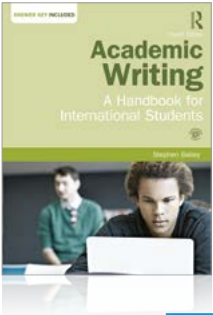
2

## AVOIDING PLAGIARISM

## 2 :: AVOIDING PLAGIARISM

STEPHEN BAILEY

The following is excerpted from  
*Academic Writing: A Handbook for  
International Students, 4th Edition*



Purchase a copy [HERE](#).

### Stephen Bailey

is a freelance writer who has taught academic English for many years in both the Far East and continental Europe, before returning to the UK to teach classes in academic writing to international students. While teaching at the University of Nottingham he developed the framework for this coursebook. He now works as a full-time writer, developing new materials in this field.

Plagiarism is a concern for teachers and students, but it can be avoided by understanding the issues involved. In the English-speaking academic world, it is essential to use a wide range of sources for your writing and to acknowledge these sources clearly. This unit introduces the techniques students need to do this.

### 1 WHAT IS PLAGIARISM?

Basically, plagiarism means taking ideas or words from a source (e.g. a book or journal) without giving credit (acknowledgement) to the author. It is seen as a kind of theft, and is considered to be an academic crime. In academic work, ideas and words are seen as private property belonging to the person who first thought or wrote them. Therefore, it is important for all students, including international ones, to understand the meaning of plagiarism and learn how to prevent it in their work.

The main difficulty that students face is that they are expected:

(a) to show that they have read the principal authorities on a subject – by giving citations.

BUT

(b) to explain these ideas in their own words and come to their own original conclusions.

There are several reasons why students must avoid plagiarism:

- To show that they understand the rules of the academic community
- Copying the work of others will not help them develop their own understanding
- Plagiarism is easily detected by teachers and computer software
- Plagiarism may lead to failing a course or even having to leave college

# 2 :: AVOIDING PLAGIARISM

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## 2 ACKNOWLEDGING SOURCES

If you borrow from or refer to the work of another person, you must show that you have done this by providing the correct acknowledgement. There are two ways to do this:

### Summary and citation

*Smith (2009) claims that the modern state wields power in new ways.*

### Quotation and citation

*According to Smith: 'The point is not that the state is in retreat but that it is developing new forms of power . . . ' (Smith, 2009: 103).*

These in-text **citations** are linked to a list of **references** at the end of the main text, which includes the following details:

Author	Date	Title	Place of publication	Publisher
Smith, M.	[2009]	<i>Power and the State</i>	Basingstoke	Palgrave Macmillan

The citation makes it clear to the reader that you have read Smith and borrowed this idea from him. This reference gives the reader the necessary information to find the source if the reader needs more detail.

## 3 DEGREES OF PLAGIARISM

Although plagiarism essentially means copying somebody else's work, it is not always easy to define.

Consider the following academic situations and decide if they are plagiarism:

1. Copying a paragraph, but changing a few words and giving a citation. Yes/No
2. Cutting and pasting a short article from a website, with no citation. Yes/No
3. Taking two paragraphs from a classmate's essay, without citation. Yes/No
4. Taking a graph from a textbook, giving the source. Yes/No
5. Taking a quotation from a source, giving a citation but not using quotation marks. Yes/No

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6. Using something that you think of as general knowledge (e.g. the ownership of mobile phones is increasing worldwide). Yes/No
7. Using a paragraph from an essay you wrote and had marked the previous semester, without citation. Yes/No
8. Using the results of your own research (e.g. from a survey you did), without citation. Yes/No
9. Discussing an essay topic with a group of classmates and using some of their ideas in your own work. Yes/No
10. Giving a citation for some information but misspelling the author's name. Yes/No

This exercise shows that plagiarism can be accidental. For example, situation 10 above, when the author's name is misspelt, is technically plagiarism, but really carelessness. In situation 9, your teacher may have told you to discuss the topic in groups, and then write an essay on your own, in which case it would not be plagiarism. Self-plagiarism is also possible, as in situation 7. It can be difficult to decide what is general or common knowledge (situation 6), but you can always try asking colleagues.

However, it is not a good excuse to say that you did not know the rules of plagiarism, or that you did not have time to write in your own words. Nor is it adequate to say that the rules are different in your own country. In general, anything that is not common knowledge or your own ideas and research (published or not) must be cited and referenced.

### 4 AVOIDING PLAGIARISM BY SUMMARISING AND PARAPHRASING

Quotations should not be overused, so you must learn to paraphrase and summarise in order to include other writers' ideas in your work. This will demonstrate your understanding of a text to your teachers.

- Paraphrasing involves rewriting a text so that the language is significantly different while the content stays the same.
- Summarising means reducing the length of a text but retaining the main points.

Normally, both skills are used at the same time, as can be seen in the examples below.



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Read the following text and then compare the five paragraphs below, which use ideas and information from it. Decide which are plagiarised and which are acceptable, and give your reasons below.

### RAILWAY MANIAS

In 1830 there were a few dozen miles of railways in all the world – chiefly consisting of the line from Liverpool to Manchester. By 1840 there were over 4,500 miles, by 1850 over 23,500. Most of them were projected in a few bursts of speculative frenzy known as the ‘railway manias’ of 1835–1837 and especially in 1844–1847; most of them were built in large part with British capital, British iron, machines and knowhow. These investment booms appear irrational, because in fact few railways were much more profitable to the investor than other forms of enterprise, most yielded quite modest profits and many none at all: in 1855 the average interest on capital sunk in the British railways was a mere 3.7 per cent.

[From *The Age of Revolution* by Eric Hobsbawm, 1995, p. 45]

- (a) Between 1830 and 1850 there was very rapid development in railway construction world wide. Two periods of especially feverish growth were 1835–1837 and 1844–1847. It is hard to understand the reason for this intense activity, since railways were not particularly profitable investments and some produced no return at all (Hobsbawm, 1995: 45).
- (b) There were only a few dozen miles of railways in 1830, including the Liverpool to Manchester line. But by 1840 there were over 4,500 miles and over 23,500 by 1850. Most of them were built in large part with British capital, British iron, machines and know-how, and most of them were projected in a few bursts of speculative frenzy known as the ‘railway manias’ of 1835–1837 and especially in 1844–1847. Because most yielded quite modest profits and many none at all these investment booms appear irrational. In fact few railways were much more profitable to the investor than other forms of enterprise (Hobsbawm, 1995: 45).
- (c) As Hobsbawm (1995) argues, nineteenth century railway mania was partly irrational: ‘because in fact few railways were much more profitable to the investor than other forms of enterprise, most yielded quite modest profits and many none at all: in 1855 the average interest on capital sunk in the British railways was a mere 3.7 per cent’ (Hobsbawm, 1995: 45).
- (d) Globally, railway networks increased dramatically from 1830 to 1850; the majority in short periods of ‘mania’ (1835–1837 and 1844–1847). British technology and capital were responsible for much of this growth, yet the returns on the investment were hardly any better than comparable business opportunities (Hobsbawm, 1895: 45).

## 2 :: AVOIDING PLAGIARISM

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(e) The dramatic growth of railways between 1830 and 1850 was largely achieved using British technology. However, it has been claimed that much of this development was irrational because few railways were much more profitable to the investor than other forms of enterprise; most yielded quite modest profits and many none at all.

Plagiarised or acceptable? And why?

(a)

(b)

(c)

(d)

(e)

### 5 AVOIDING PLAGIARISM BY DEVELOPING GOOD STUDY HABITS

Few students deliberately try to cheat by plagiarising, but some develop poor study habits that result in the risk of plagiarism.

Add to the list of positive habits.

- Plan your work carefully so you do not have to write the essay at the last minute.
- Take care to make notes in your own words, not copying from the source.
- Keep a record of all the sources you use (e.g. author, date, title, page numbers, publisher).
- Make sure all your in-text citations are included in the list of references.
- \_\_\_\_\_
- \_\_\_\_\_

## 2 :: AVOIDING PLAGIARISM

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### 6 PRACTICE

Match the words with the phrases listed below.

<b>Source</b>	Using the exact words of the original text in your work
<b>Citation</b>	To gain advantage dishonestly
<b>Summarise</b>	Short in-text note giving the author's name and publication date
<b>Quotation</b>	To reduce the length of a text, but keeping the main points
<b>Reference</b>	Any text that students use to obtain ideas or information
<b>To cheat</b>	Full publication details of a text to allow a reader to access the original

### 7 RESEARCH

Find out more...

<http://owl.english.purdue.edu/owl/resource/589/01>

[www.uefap.com/writing/plagiar/plagfram.htm](http://www.uefap.com/writing/plagiar/plagfram.htm)

CHAPTER

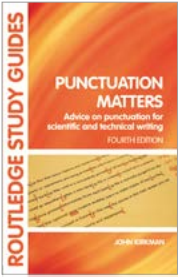
# 3

## PARAGRAPHING

# 3 :: PARAGRAPHING

JOHN KIRKMAN

The following is excerpted from  
*Punctuation Matters: Advice on  
Punctuation for Scientific and Technical  
Writing, 4th Edition*



Purchase a copy [HERE](#).

## John Kirkman

is a communications specialist who runs his own consultancy specialising in technical and scientific writing.

Our awareness of paragraphs in English is due more to their semantic content than to any formal indicators. The most readable prose is the kind that provides for some kind of logical transition at the beginning. The commonest device is the topic sentence. There are hackneyed ways of introducing it – *Next I want to speak of ...*; *We turn now to ...*; *Leaving that for the moment, what can we say of ...* And sometimes a writer or speaker will number his paragraphs. But as a rule, nothing in particular, least of all syntactic, labels either the beginning or the end.

Dwight Bolinger, *Aspects of Language* [p172]

## REASONS FOR PARAGRAPHING

A text must be divided into paragraphs for reasons of logic and emphasis, not just to make it look attractive. The appearance of a text is not *unimportant*: but primarily, the layout must show how the information is grouped into units of thought or data. In *Modern Rhetoric* [p356], Cleanth Brooks and Robert Penn Warren emphasise the principal function of paragraphing: it enables a writer 'to make his thought structure visible upon the page itself'.

## THE IMPORTANCE OF WHITE SPACE

The thought structure, or pattern of information, is outlined by the white space between paragraphs. Unspaced text is objectionable because it does not signal clearly the boundaries of larger information units on the page, and how those units are patterned. Readers need clear signals to mark the boundaries of larger units like paragraphs just as much as they need signals to mark the boundaries of lower order units.

But white space also affects the 'attractiveness' of a page. A dense page of type with no white space between paragraphs has a daunting effect. It makes readers feel like tourists who want to climb a tower but are discouraged by a hundred-step staircase with no landings on which to rest and regain breath. Equally, though, a text that consists solely of very short paragraphs is an unattractive prospect: its effect is like that of a hundred-step staircase that has fifty landings separating groups of two steps. We have to find a balance between those two extremes. The following pages show examples of the extremes. Note the daunting impression created by the text on page 46, which consists entirely of one paragraph. The text on page

## 3 :: PARAGRAPHING

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JOHN KIRKMAN

47 is also unattractive, even though it is broken into two paragraphs. The practice of omitting line spaces between paragraphs creates a solid, dense impression, which discourages readers even before they start to read the text on the page. The line of white space left between paragraphs is certainly not wasted space: it helps substantially in the process of making thought structure visible.

However, excessive breaking of the text into paragraphs creates a bitty effect, demonstrated by the example on page 48. The example on page 49 shows one way in which the text might be paragraphed more appropriately than in the previous three examples.

Note, too, in all four versions, the uncomfortably varied inter-word spacing created by a poor right-justification system. Well judged and consistent use of white space between paragraphs, between lines, and around text contributes greatly to the readability of a page. Inconsistent amounts of white space, caused by spreading out of words to 'fill' lines, have a disruptive effect.

# 3 :: PARAGRAPHING

JOHN KIRKMAN

## 4 Good Style for Scientific and Engineering Writing

The linguistic choices made here alter the emphasis and tone of the statements, though the meaning stays the same. The factors that make one or other of the versions more effective as written communication are not matters of accuracy or clarity of technical content, nor are they matters of grammar: they are bound up with the relationship between the writer and the reader(s), and with the context in which the exchange takes place. In other words, in judging effectiveness of communication and suitability of style, we must take into account both the *accuracy* and the *propriety* of the language chosen. If this book is to offer advice on the best style for scientific and technical writing, I must begin by defining the type(s) of writing I have in mind – by defining the writing/reading contexts in which the exchanges are to take place. Only then will it be possible to discuss which tactical choices will best convey the desired meaning with the accuracy, balance, emphasis, and tone required. Broadly, I am concerned with the types of writing that are used for passing scientific and technical information between professional staff in academic, industrial and research organisations: that is, between groups whose intellectual capacities are approximately equal but whose specialist backgrounds may be very different. I am concerned, therefore, with reports, journal articles, proposals, technical memoranda, operating instructions and procedures, specifications, and support documentation for equipment. I am not suggesting tactics for explaining complex scientific and technical ideas to the general public. Mass communication poses special problems of selection and presentation, which are not the concern of the average engineer or scientist. Nor am I suggesting tactics for advertising and commercial writing. Though *all* communication is in a sense an attempt to sell someone else our ideas, there is a difference in degree between the tactics needed to advocate a change from one soap powder to another, and those needed to present new scientific ideas to colleagues in industry and research. I am concerned with the main writing tasks that confront professional ...

A page illustrating the daunting impression created by a very long paragraph

## 3 :: PARAGRAPHING

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### 4 Good Style for Scientific and Engineering Writing

The linguistic choices made here alter the emphasis and tone of the statements, though the meaning stays the same. The factors that make one or other of the versions more effective as written communication are not matters of accuracy or clarity of technical content, nor are they matters of grammar: they are bound up with the relationship between the writer and the reader(s), and with the context in which the exchange takes place. In other words, in judging effectiveness of communication and suitability of style, we must take into account both the *accuracy* and the *propriety* of the language chosen. If this book is to offer advice on the best style for scientific and technical writing, I must begin by defining the type(s) of writing I have in mind – by defining the writing/reading contexts in which the exchanges are to take place. Only then will it be possible to discuss which tactical choices will best convey the desired meaning with the accuracy, balance, emphasis, and tone required.

Broadly, I am concerned with the types of writing that are used for passing scientific and technical information between professional staff in academic, industrial and research organisations: that is, between groups whose intellectual capacities are approximately equal but whose specialist backgrounds may be very different. I am concerned, therefore, with reports, journal articles, proposals, technical memoranda, operating instructions and procedures, specifications, and support documentation for equipment. I am not suggesting tactics for explaining complex scientific and technical ideas to the general public. Mass communication poses special problems of selection and presentation, which are not the concern of the average engineer or scientist. Nor am I suggesting tactics for advertising and commercial writing. Though *all* communication is in a sense an attempt to sell someone else our ideas, there is a difference in degree between the tactics needed to advocate a change from one soap powder to another, and those needed to present new scientific ideas to colleagues in industry and research. I am ...

A page illustrating the dense impression created by omission of line spaces between paragraph



## 3 :: PARAGRAPHING

JOHN KIRKMAN

### 4 Good Style for Scientific and Engineering Writing

The linguistic choices made here alter the emphasis and tone of the statements, though the meaning stays the same.

The factors that make one or other of the versions more effective as written communication are not matters of accuracy or clarity of technical content, nor are they matters of grammar: they are bound up with the relationship between the writer and the reader(s), and with the context in which the exchange takes place.

In other words, in judging effectiveness of communication and suitability of style, we must take into account both the *accuracy* and the *propriety* of the language chosen.

If this book is to offer advice on the best style for scientific and technical writing, I must begin by defining the type(s) of writing I have in mind – by defining the writing/reading contexts in which the exchanges are to take place. Only then will it be possible to discuss which tactical choices will best convey the desired meaning with the accuracy, balance, emphasis, and tone required.

Broadly, I am concerned with the types of writing that are used for passing scientific and technical information between professional staff in academic, industrial and research organisations: that is, between groups whose intellectual capacities are approximately equal but whose specialist backgrounds may be very different.

I am concerned, therefore, with reports, journal articles, proposals, technical memoranda, operating instructions and procedures, specifications, and support documentation for equipment.

I am not suggesting tactics for explaining complex scientific and technical ideas to the general public. Mass communication poses special problems of selection and presentation, which are not the concern of the average engineer or scientist. Nor am I suggesting...

A page illustrating the bitty effect created by excessive division into paragraphs

## 3 :: PARAGRAPHING

JOHN KIRKMAN

### 4 Good Style for Scientific and Engineering Writing

The linguistic choices made here alter the emphasis and tone of the statements, though the meaning stays the same.

The factors that make one or other of the versions more effective as written communication are not matters of accuracy or clarity of technical content, nor are they matters of grammar: they are bound up with the relationship between the writer and the reader(s), and with the context in which the exchange takes place. In other words, in judging effectiveness of communication and suitability of style, we must take into account both the *accuracy* and the *propriety* of the language chosen.

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Broadly, I am concerned with the types of writing that are used for passing scientific and technical information between professional staff in academic, industrial and research organisations: that is, between groups whose intellectual capacities are approximately equal but whose specialist backgrounds may be very different. I am concerned, therefore, with reports, journal articles, proposals, technical memoranda, operating instructions and procedures, specifications, and support documentation for equipment.

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One way in which the text might be paragraphed more appropriately than in the previous three examples

# 3 :: PARAGRAPHING

JOHN KIRKMAN

## LENGTH OF PARAGRAPHS

There is no formula by which either the length or the structure of a paragraph can be judged as 'good' or 'bad'. In *A Comprehensive Grammar of the English Language* [p1624], Professor Randolph Quirk and his colleagues say:

Rather than attempting to recommend an ideal size of paragraph or models for its ideal identity, we should note that the paragraph enables a writer to show that a particular set of sentences should be considered as more closely related to each other, and that those grouped within one paragraph are to be seen as a whole in relation to those that are grouped in the paragraphs preceding and following.

A paragraph should deal with only one topic: but to explain everything about one topic, you may need several paragraphs, each consisting of a group of related points. A topic may therefore be covered in one single-sentence paragraph or in a sequence of paragraphs that all contain several sentences.

Rough 'rules of thumb' for length are:

- single-sentence paragraphs should appear only rarely, to give special emphasis to a topic or point;
- paragraphs covering more than one-third of a page will probably overwhelm your reader.

## LINKS AND OPENING SENTENCES

A well written paragraph will normally announce its topic in its opening sentence, and go on to develop that topic – give additional facts or discuss particular aspects – in succeeding sentences. Well written text also makes ample use of link words and link phrases to signal to readers the relationship between information in the new paragraph and information they have just absorbed:

As a result, ...  
At the same time, ...  
In contrast, ...  
For the same reason, ...  
So, ...  
Accordingly, ...

## 3 :: PARAGRAPHING

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JOHN KIRKMAN

However, beware of giving your work the 'hackneyed' tone mentioned by Bolinger (at the introduction to this chapter). Review your writing for coherence and emphasis. To review coherence, look to see if your ideas are in a clear, logical order, comfortably packed together. To check emphasis, look to see if the main things you want to say are prominent, either in short paragraphs on their own or in dominant positions in longer paragraphs (dominant positions are the beginnings and ends). Look for *variety* of structure: if all your paragraphs are much the same structure and length, look for an opportunity to emphasise the main topics by re-structuring your text.

CHAPTER

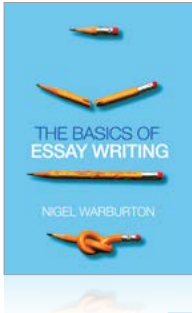
4

# THE CRAFT OF WRITING

# 4 :: THE CRAFT OF WRITING

## NIGEL WARBURTON

The following is excerpted from  
*The Basics of Essay Writing*



Purchase a copy [HERE](#).

### Nigel Warburton

is Senior Lecturer at The Open University and a bestselling author. His other books include *Thinking from A to Z*, third edition, *Philosophy: The Basics*, fourth edition, *Philosophy: The Classics*, third edition, *Philosophy: The Essential Study Guide* and *The Art Question and Freedom*, all published by Routledge.

Have something to say and say it as clearly as you can. That is the only secret of style.

(Matthew Arnold)

### GET THE TONE RIGHT

One of the surest ways of irritating your reader is to use colloquial language or a conversational style in an academic essay. The tone or register of what you write can be as important as its content. The academic essay is the wrong place to experiment with writing styles; save the experimentation for a creative writing class or your private notebooks, letters, emails or text messages. It is difficult to lay down guidelines about what is acceptable in this respect, but it is important to develop an ear for the appropriate language to use.

Here is an extreme case. If a student writes an essay using the spelling conventions of a text message – ‘2day’ for ‘today’ or ‘evng’ for ‘evening’, for example – this creates a bad impression no matter how brilliant the essay’s content. It shows insensitivity to the academic context. While text message abbreviations are effective in text messages, and some journalistic writing and advertising copywriting too, they are completely inappropriate in a student essay (unless, perhaps that essay is about different spelling conventions, in which case they would appear within inverted commas as *examples of* rather than *uses of* the words). Here are some more examples of inappropriate colloquialisms:

- ‘Loads of writers admire Shakespeare’s imagery’ [use ‘many’]
- ‘In *The Merchant of Venice*, Antonio and his mates tease Shylock’ [use ‘his friends’]
- ‘My favourite poem is Shelley’s ‘Ozymandias’ – it is wicked’ [use ‘a remarkable poem’ or equivalent]
- ‘Othello loses his rag when he thinks Desdemona has betrayed him’ [use ‘loses his temper’]

### FIVE SYMPTOMS OF AN INAPPROPRIATE TONE

- Use of *exclamation marks* (unless within quotations). Worse still are double exclamation marks, e.g. ‘King Duncan doesn’t realise that the Macbeths are planning to murder him!!’
- Use of *slang* (again, unless within quotations), e.g. ‘Banquo is a diamond geezer.’
- *Chattiness*: e.g. ‘Well that’s enough of my random thoughts, let’s have a look at what the author says on the topic.’

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- *One-sentence paragraphs*. These are only really acceptable in tabloid journalism. On rare occasions they may be acceptable, but consecutive single-sentence paragraphs are almost always a mark of inappropriate tone.
- *Jokey comments*: e.g. 'Shakespeare's Macbeth (now there's a henpecked guy!) hallucinates a dagger . . . What was he on?'

One way of developing sensitivity to academic writing and markers' expectations is to look at other students' essays, preferably alongside the feedback received from markers. This is a good way of understanding the range of styles of writing that a question can elicit. Another strategy is to try reading your own work aloud; this is an excellent technique for achieving a distance from your own writing, a distance that can allow you to develop a critical stance towards some aspects of it.

#### BE ECONOMICAL WITH ADJECTIVES

Adjectives are words that colour prose: they describe nouns. 'The *quick sly* fox with *reddish* hair dashes through the *glistening wet* undergrowth' contains five adjectives (all italicised). The best writers use adjectives with care. Try to avoid using more than one adjective to describe a single item: so write 'Hardy's bleak prose' rather than 'Hardy's bleak, sombre and dark prose'. If you use strings of adjectives, your essays will read like the worst kind of creative writing.

#### PUNCTUATE EFFECTIVELY

##### APOSTROPHES

Apostrophes are very small, and misusing them is a minor mistake. Nevertheless, you should be aware that some examiners get very irritated by students who don't know how to use them. Their irritation is often out of all proportion to the seriousness of the mistake: when students misuse apostrophes there is rarely any ambiguity about what they mean. Despite this, though, many people can't help getting twitchy when they notice missing or, worse still, inappropriate apostrophes. You may think 'Well, that's their problem', but irritating your examiner could affect your overall grade. You may not lose marks directly for that missing bit of punctuation, but you may have suggested to the examiner that you are not quite a first-rate student. This is not a good policy. If you ever make mistakes with apostrophes it is worth taking twenty minutes to break this habit.

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There are two uses of the apostrophe: to indicate a letter or letters that have been left out; and to indicate possession.

#### *Missing letters*

- 'It's' is short for 'it is', as in 'It's easy to improve.' (Don't confuse this with 'its', which means 'belonging to it' as in 'the dog bit its own tail'.)
- 'Don't' is short for 'do not'.
- 'Can't' is short for 'cannot'.
- 'Who's' is short for 'who is', as in 'Who's afraid of Virginia Woolf?' (Don't confuse this with 'whose', which is the possessive of 'who', as in 'the man whose car is parked outside'.)

#### *Possession*

The simplest cases are when the word doesn't end in an 's', e.g. 'The dog's dinner', 'the cat's whiskers'. When you are talking about more than one dog or cat, these should be 'the dogs' dinner' and 'the cats' whiskers'.

Note that when a plural doesn't end in 's', such as 'children', you simply add the apostrophe and then an 's': so you would write 'the children's playground'.

When you have a name that ends in 's', there are two different conventions. You should choose one or the other and be consistent:

1. Convention 1: just add the apostrophe as in 'Paris' suburbs' or 'Caruthers' book'.
2. Convention 2: add the apostrophe followed by a further 's', as in 'Paris's suburbs' or 'Caruthers's book'.

The commonest mistakes that students make are leaving the apostrophe out altogether, writing phrases such as 'Hardys novel' rather than 'Hardy's novel'. More irritating still is putting in extra apostrophes: some students add them when they use a plural, e.g. 'Second World War pilot's won the Battle of Britain'. Here there is neither a missing letter nor any possession, so the apostrophe shouldn't be used.

If you are unsure about apostrophes, get a friend to copy out a short passage from something you are reading, leaving out all the apostrophes. Try putting them in yourself and see how you get on.



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#### COMMAS

A common mistake is to leave out the second of two parenthetical commas. 'Parenthesis' is another word for bracketing off something. With this use of commas, omitting the second comma is like failing to put in a second bracket. So, for example, in the sentence I'm writing, the words 'for example' are bracketed off between two commas. Had I only included the first example thus: 'So, for example in the sentence I'm writing . . .' then the function of the first comma would be confusing. Look for missing second commas of this kind when you are revising your work.

#### COLONS AND SEMICOLONS

What colons are good for: fulfilling the promise expressed in the first part of a sentence (as in this sentence). Semicolons are useful when you want to break up a list that includes several quite long items; they are also effective when you want to balance two parts of a sentence (as in the one you are reading now). However, if you don't feel confident using long sentences split by semicolons, it is much safer to use a full stop, breaking a longer sentence in two. In the case of my own sentence above I could quite easily have written: 'Semicolons are useful when you want to break up a list that includes several quite long items. They are also effective when you want to balance two parts of a sentence.' I suspect that the two-sentence version is slightly easier to follow. If you agree, then think hard before you write a long sentence. It might be better to split it into two or more shorter sentences, either as you write, or at the editing stage.

#### EXCLAMATION MARKS

Don't use exclamation marks unless you are quoting something that includes them. You can probably get away with one exclamation mark or perhaps two in an essay, but why take the risk? Exclamation marks are like heavy nudges in the ribs: not really appropriate for the tone of an academic essay. Resist the temptation to use this form of punctuation. It is unlikely that any academic essay has ever been improved by using exclamation marks.

#### USE THE ACTIVE VOICE

One of the easiest ways to make your writing more direct is to eliminate passive constructions. Use only active constructions. 'The Romans defeated the Britons' is an active use of the verb 'defeated'. 'The Britons were defeated by the Romans' is a passive use. Notice that the first sentence has only five words, whereas the

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second has seven. But apart from the passive being a more wordy way of expressing the same idea, it is more difficult to unravel when reading. Clear, straightforward sentences are expressed in the active.

Good writers rarely use the passive voice. Officials in government often use passive constructions, perhaps at times to make what they are saying slightly opaque. As Harold Evans, the newspaper editor, commented, Churchill's direct declaration 'Give us the tools and we will finish the job' easily trumps its translation into the style of an official communication: 'The task would be capable of determination were the appropriate tools to be made available to those concerned' (Harold Evans, *Essential English*, p. 24).

Here are some examples of passive constructions that use an impersonal 'it'.

Avoid them:

- It is often argued that
- It is the case that/It is not the case that
- It is believed that
- It cannot be denied that
- It will be recognised that
- It should be pointed out that
- It was felt necessary
- It should be noted that

Impersonal passives conceal who is arguing, believing, denying and so on; they also add unnecessary words to your essay. When you read through a draft, look out for these phrases and wherever possible rewrite sentences that contain them.

#### A NOTE ABOUT CONVENTIONS IN SCIENCE

The standard convention for writing scientific reports and papers is to write them in the passive voice. So, for example, your teacher may expect you to write up a chemistry experiment impersonally: rather than 'I heated the liquid in the test tube until it boiled', your description might read 'the liquid in the test tube was heated until it boiled'. Teachers may also ask you to write up experiments or surveys in the social sciences using this convention. Be sure that you know whether this is the convention that your teacher or lecturer wants you to use. If it isn't, then eliminate passive constructions altogether.

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### AVOID CONVOLUTED SENTENCES

The easiest way to avoid convoluted sentences is to write short to medium-length ones. Avoid long sentences altogether in exams. If you find a sentence winding on from one line to the next and to the next, then it is probably too long. There is a straightforward solution. Find a place to break the sentence, then rewrite it as two shorter sentences (see below for an example). A succession of very short, abrupt sentences can be almost as difficult to read as a long one. The most stylish essay writers as a matter of second nature avoid writing long and syntactically complex sentences. Nevertheless, some academics do welcome longer sentences, but only well-structured ones, as the following quotation from Thomas Dixon's book *How to Get a First* makes clear. Notice that he actually illustrates his points by using longer and shorter sentences as he is writing about them:

Academics disagree amongst themselves about sentences. Some favour short ones. Others are quite happy, indeed enthusiastic, about the idea that students should, in the course of their studies, cultivate the art of the long sentence; being able to retain control of one's ideas and language while constructing a complex and involved sentence, making judicious use of commas and semicolons, they say, is an important academic skill. I prefer brevity. There is no need to adopt a hard and fast rule about this though. Sometimes a long and involved sentence might be appropriate and attractive. In my experience of reading and marking student essays, however, their sentences seem to be too long more often than they are too short.

(Dixon, 2004, pp. 148–9)

If you must write longer sentences, make sure they aren't convoluted. Don't make the reader work too hard to extract meaning from what you have written. The safest policy is always to write short to medium-length sentences. This is an aspect of the best general advice for writers: 'be concise'.

### BE CONCISE

In their classic short book on writing, *The Elements of Style* (2000), Strunk and White's most important piece of advice is contained in three words that make up a section heading, 'Omit needless words'. This is explained in slightly more detail:

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Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all sentences short, or avoid all detail and treat subjects only in outline, but that every word tell.

(Strunk and White, 2000, p. 23)

This is excellent advice. Follow it. Notice too that by following their own advice Strunk and White could probably have reduced this instruction to two words: be concise.

### AVOID ADVERBS

Adverbs are words which describe the verb in a sentence. So, for example, I have underlined the adjectives in the short passage below. They usually end in 'ly'.

The fish swim quickly upstream, afraid that the dark waters might totally engulf them. Swiftly they flash past the river bank, steadfastly driving onwards to their breeding grounds.

Adverbs have their uses, but their frequent use almost always detracts from the directness of writing. Even if you are a creative writer, pay careful attention to their use. If you are editing your work, try going on an adverb hunt. For each adverb tracked down in your writing, decide whether anything has been lost by removing it. If something is lost, is there a better way of expressing the same idea?

### AVOID CLICHÉS

A cliché is an overused phrase. The word 'cliché' is pejorative: calling something a cliché suggests that it is a bad use of English. So the judgement that a phrase is a cliché is already a judgement that it is something to avoid. Here are some examples:

at the end of the day  
barking up the wrong tree  
a can of worms  
the dim and distant past  
can't see the wood for the trees  
dire straits  
far and away  
glutton for punishment

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great minds think alike  
in this day and age  
in the nick of time  
new lease of life  
silent majority  
the fact of the matter is . . .  
throw the baby out with the bathwater  
tower of strength  
well and truly  
with the best will in the world

You should avoid clichés wherever possible as they make your writing dull: think how little would have been added to this last sentence if I'd written 'as dull as ditchwater' in place of 'dull'. Your ideas won't seem fresh if they are presented using these familiar expressions. Clichés also contribute to a journalistic or colloquial tone that is inappropriate for academic writing. Most of us use clichés in speech and in writing without recognising it, or at least without worrying about it. Becoming aware of clichés in your writing can be an important step towards clearer and more precise self-expression.

### LEARN FROM OTHERS' CLARITY

If you come across a piece of writing that seems particularly clear, try to work out how the writer has achieved this effect. Perhaps even copy out the passage, adding your own notes below it. If you get the opportunity to read other students' essays on a topic on which you have written, take it. Ask yourself whether the writer is easy or difficult to follow. Most students have very little idea about how people reading their work will experience it.

### AVOID THESE COMMON MISTAKES

**alternate/alternative:** When used as an adjective, 'alternate' means one then the other, as in the instruction to use alternate legs for an aerobics exercise; an 'alternative' is a choice.

**complement/compliment:** These are two different words. If something complements something else, it makes it complete. This is an easy way of remembering which (complement/compliment) is which; look at the spelling of 'complement' and 'complete'. A compliment, in contrast, is praise.

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**criterion/criteria:** 'Criterion' is the singular, 'criteria' the plural. So don't write 'a criteria'.

**disinterested/uninterested:** A common mistake is to think that 'disinterested' means 'bored by'. It doesn't. Disinterested research is unbiased research. Don't write 'He was disinterested' when you mean 'he was uninterested' (i.e. bored by).

**e.g./i.e.:** 'E.g.' means 'for example, as in 'there are many carnivorous animals, e.g. lions and tigers'. What follows 'e.g.' is simply a specific instance of something more general. 'I.e.' means 'that is'. Whatever follows 'i.e.' must be the equivalent of what has just been stated, as in 'the writer who was known as George Orwell, i.e. Eric Blair'. Contrast this with 'There are many well-known writers who have used pseudonyms, e.g. the writers known as Lewis Carroll, George Eliot and George Orwell.'

**fewer/less:** Use 'fewer' when you are writing about individual things; 'less' when you are referring to quantity that doesn't divide up into units. This is easier to demonstrate than explain. 'There are fewer people here today than yesterday' is correct. 'There are less people here' is incorrect. 'There is less water in the tank' is correct. 'I have less money in my pocket' is correct, as is 'I have fewer coins in my pocket', but 'I have less coins' is incorrect.

**its/it's:** 'It's' is short for 'it is', as in 'It's Tuesday.' 'Its' is the possessive of 'it', as in 'The dog wagged its tail.' If you have a tendency to muddle these two, make sure you check through your work at the editing stage.

**literally:** Sentences such as 'he was literally over the moon', unless used to describe astronauts, show that the writer doesn't understand the meaning of the word 'literally' (in this case too, unless used ironically, the cliché 'over the moon' should be avoided). When you edit your work, the safest and most stylish option is to cut out all uses of 'literally'. If you do want to use the word, make sure you avoid absurdity.

**phenomenon/phenomena:** 'Phenomenon' is the singular, 'phenomena' the plural. So don't write 'a phenomena'.

**principle/principal:** a principle is a rule or guideline; 'principal' means 'main', or in the United States it is the head teacher in a school (hence the American mnemonic 'your principal is your pal').

**refute/repudiate:** If you refute a statement, you demonstrate that it is false. If you repudiate it, you simply deny it.

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**stationery/stationary:** Stationery is paper, envelopes, etc. 'Stationary' means not moving.

**their/there/they're:** 'Their' is a possessive, as in 'They put on their hats'; 'there' is a place, as in 'over there'; 'they're' is an abbreviation of 'they are'. Most people know the difference between these three words, but even some university students confuse 'there' and 'their', so it is worth checking your work through before handing it in to make sure that you have used the correct form of these homonyms (words that sound the same). Getting them wrong is likely to colour the marker's impression of you.

#### AVOID SEXIST LANGUAGE

Some ways of phrasing your essay can appear sexist. For example, if you talk about 'man' or 'mankind' when you mean to include women as well, you run the risk of coming across as sexist even if that is not your general stance on the world. If, for example, you describe archaeology as 'the study of man's past through his artefacts', you seem to be excluding women and their artefacts from the study. There are various ways in which you can avoid this charge of sexism. One is to use 'humanity' rather than 'man'. Here are some terms which may come across as sexist, together with a more neutral alternative for each:

actress – actor  
air hostess – flight attendant  
chairman – chair  
fireman – firefighter  
foreman – supervisor  
layman – layperson  
mankind – humankind  
masterpiece – work of genius, iconic work  
policeman – police officer  
salesman – salesperson (though, obviously, you shouldn't alter the title of Arthur Miller's play *Death of a Salesman*)  
weatherman – weather forecaster  
workman – worker

Don't use 'he' (or 'she') when you mean 'he or she'. One option is to use 'they', as in 'If a headteacher is involved they should fill in a record of the meeting' rather than 'If a headteacher is involved he should fill in a record of the meeting.' The second of these two examples gives the impression that all headteachers are male. The first, however, is rather awkward. A far better solution in many cases is to rephrase the

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sentence so that you are using a plural noun. In the case above, this would give us 'If headteachers are involved they should fill in a record of the meeting.' As you can see from this example, however, this may change nuances of meaning. You need to be sensitive to individual cases and find an alternative that captures the meaning you want to express. Even if you don't happen to believe that the use of 'he' for 'he or she' is sexist, it probably isn't worth risking using 'he' in this context as the person marking your essay may feel quite differently about this.

### SPELLING

In the age of electronic spell-checkers it is very easy to conceal poor spelling. However, most students aren't allowed to use spell-checkers in exams. So, it is a good idea to put in a few hours to make sure that you don't make basic spelling mistakes, not because you are likely to have marks deducted for poor spelling, but rather because poor spelling may colour an examiner's view of you. The most important spellings to get right are the names of people, characters, places, books, poems, paintings, etc. that are the subject matter of your essay. Make sure that you know how to spell these. It is very simple to make a list of the key proper names that occur in your subject. Some names, such as 'Nietzsche', are very difficult to spell: it is worth putting in some time learning these, as if you get them wrong you may give the examiner the impression that you don't care very much about the subject.

Apart from names, there are many words which students struggle to spell. Below is a list of words that students often misspell. Skim over it to see whether you know all the spellings: if not, create your own list of difficult words. Recognise that we all have difficulty with some words, but you can eliminate some obvious mistakes, and in the process give a much better impression to the person reading your essay.

### DIFFICULT SPELLINGS

abbreviation	analogous
absence	annihilate
accident	antecedent
accommodation	apparatus
achieve	apparently
acknowledge	appreciate
acquire	approach
address	argument
adjacent	artefact
advertisement	basically



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beautiful  
beginning  
believe  
buried  
business  
caricature  
census  
character  
chronological  
colleague  
committee  
conceit  
conceive  
condemn  
consensus  
courtesy  
deceive  
despair  
despise  
dilemma  
ecstasy  
efficient  
embarrass, embarrassment  
environment  
exercise  
exorcise (*or* exorcize)  
existence  
extraordinary  
fulfil  
glamour, glamorous  
government  
gruesome  
hoi polloi  
humorist  
humour, humorous  
idiosyncrasy  
idiosyncratic  
illiterate  
immigration  
in flagrante  
incendiary  
incentive  
incomprehensible  
indigenous  
independent  
indispensable  
inoculate  
instil  
irresponsible  
itinerary  
jeopardy  
judgement  
knowledgeable  
literary  
literature  
medieval  
millennium  
necessary  
non sequitur  
noticeable  
obscene  
obsolete  
occasion  
occur  
occurred  
omit  
parliament  
playwright  
possession  
prerogative  
properly  
psychiatric  
psychiatrist  
psychological  
questionnaire  
really

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receipt	succeed
receive	success, successful
recommend	summary
repeat	supersede
repetition	surreptitious
restaurant	symbol
rhyme	temperature
rhythm	threshold
schedule	transfer, transferable, transferred,
seize	transferring
separate	vicious
siege	viscous
solemn	Wednesday
stationary	withhold
stupefy	written
subtle, subtlety	xenophobia

### KEY POINTS

- The tone of your writing should be appropriate for an academic essay.
- Small mistakes, such as misplaced apostrophes, can have a disproportionate effect on a marker's impression of your work.
- Avoid passive constructions, adverbs and overuse of adjectives.
- Be concise.

CHAPTER

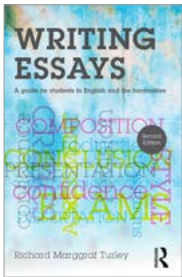
5

# HOW TO WRITE CONCLUSIONS

# 5 :: HOW TO WRITE CONCLUSIONS

RICHARD MARGGRAF TURLEY

The following is excerpted from  
*Writing Essays: A guide for students in  
English and the humanities, 2nd Edition*



Purchase a copy [HERE](#).

## Richard Marggraf Turley

is Professor of English Literature at Aberystwyth University. He is the author of various scholarly articles and books on the Romantic poets, as well as three volumes of his own poetry and a novel, *The Cunning House*.

If introductions are all about making a first impression, conclusions are about leaving a last impression, which is equally important. Apart from your bibliography, the conclusion is the last thing your tutor will read before a mark is entered that will live on in your degree transcript forever. With the conclusion, as with all stages of the essay, there are things to do and things to don't.

Let's begin with a distinction between *summary* and *discursive* conclusions. The first, as the name suggests, is retrospective in character, and functions to gather together the ideas developed over the course of your essay. It's useful when you're trying to persuade your reader, and can help 'prove' your case or clinch a larger point.

The 'discursive' conclusion, by contrast, continues developing your argument until the last full stop. It tends to work well with assignments that are wide-ranging in scope and are perhaps more conversational in tone. We'll consider both types of conclusion in more detail.

## 'SUMMARY' CONCLUSIONS

### WEIGHING UP YOUR OWN ARGUMENT

If you are writing an essay that sets out to establish something reasonably concrete – that, say, governments toady up to popular newspapers, or mass surveillance has a chilling effect on whole populations – it's a good idea to use your final paragraph to weigh up the main arguments rehearsed in your discussion.

Through distillate restatement, the reader gets a quick 'refresher' of the salient points, and you get an opportunity to draw your best sections into clear focus one last time. Remember to end on an evaluative note, though, rather than descriptive. Here's a summary-style conclusion from an English student named Katy, whose essay explores two differently inflected critical approaches to the work of Romantic poet, John Keats (1795–1821). The first, 'traditional' view argues that Keats's poetry displays his desire to transcend the world, to disengage from contemporary politics and 'real life'; the second, 'materialist' approach asserts that, on the contrary, Keats's work is deeply embedded in the events and debates of its day. Katy's final paragraph reads as follows:

As I have shown, both schools of criticism under consideration provide inadequate accounts of Keats's poetry. Traditional approaches fail to consider the influence of society and politics on the imagination (the unconscious 'place' of inspiration Keats

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inhabited during his composition), while materialist criticism does not take into account the possibility that at times Keats may only have been obliquely (subconsciously) affected, if at all, by what he saw around him. However, as I have demonstrated in my essay, the respective opposing stances adopted by these critiques can be resolved into a view of Keats that both recognizes the influence of specific historical conditions on his compositional process and, at the same time, acknowledges the role of the transcendent and transcending poetic imagination.

This is a pleasure to read. In her essay, Katy has resisted plumping for one or the other approach as a 'cure-all' solution to the challenges of reading Keats. Instead, she identifies blinkered perspectives in both schools of criticism. Her conclusion broadly reiterates what her larger discussion has illustrated in detail.

Namely, that: (1) traditional views of Keats as an isolated genius, immured or oblivious to the realities of day-to-day life, fail to recognize the profound influence political events had on his writing; (2) more recent historicist or materialist accounts, which argue literature should be understood in terms of specific historical contexts, do not always appreciate that the influence of turbulent political times on Keats was often indirect and nebulous, rather than immediate and obvious. After scrutinizing the merits and de-merits of each methodology, Katy concludes that a more integrated reading of Keats is possible.

The style, too, is impressive. Take another look at the last sentence:

However, as I have demonstrated in my essay, the respective opposing stances adopted by these critiques can be resolved into a view of Keats that both recognizes ... and, at the same time, acknowledges ...

I like the phrase 'resolved into'. It's really just another way of saying 'can be combined', but it's more interesting and betokens a developed and sophisticated critical vocabulary. Improvements? I would delete the word 'subconsciously' in parentheses halfway through the paragraph because it adds very little, and perhaps even confuses matters:

... while materialist criticism does not take into account the possibility that Keats may only have been obliquely (subconsciously) affected by what he saw around him, rather than directly and consciously.

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I'm a little uneasy, too, about the first set of parentheses:

Traditional approaches fail to consider the influence of society and politics upon the imagination (that is, the unconscious 'place' Keats inhabited during his composition)

This seems to suggest that Keats's poetic imagination was 'unconscious' after all, thus reinforcing the traditional view of Keats as a transcendent, ethereal genius, the conduit of the muses who wrote great poetry without really knowing how, his pen a hollow bone for inspiration. We could improve the sentence, stylistically as well as in terms of intellectual clarity, by replacing the parenthetical material with: (the apparently autonomous space of inspiration Keats inhabited during composition)

I would also be tempted to tinker with the last sentence:

However, as I have demonstrated in my essay, the respective opposing stances adopted by these critiques can be resolved into a view of Keats that both recognizes the influence of specific, historical conditions on his compositional process and, at the same time, acknowledges the role of the transcendent and transcending poetic imagination.

To be honest, it's a bit cumbersome. A more wieldy version would be:

However, as I have demonstrated in my essay, these opposing critiques can be resolved into a view of Keats that both recognizes the influence of history on his writing and, at the same time, acknowledges the role of the transcendent poetic imagination.

### UNDER THE MICROSCOPE

How does Katy successfully summarize her argument in such clear and concise terms? Let's look at the passage again, this time from a technical perspective. Here's the revised second sentence:

(2) Traditional approaches fail to consider the influence of society and politics on the imagination (the apparently autonomous space of inspiration Keats inhabited during composition), while materialist criticism does not take into account the possibility that at times Keats may only have been obliquely affected, if at all, by what he saw around him.

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If we boiled it down to its rhetorical components, we'd end up with:

Traditional approaches fail to do A, while materialist approaches fail to do B.

Reduced even further:

X fails to do A, while Y fails to do B.

This is an example of what we might call a 'seesaw' sentence, where 'while' acts as the pivot. As soon as we reach 'while', we know the second half of the sentence must contain a point of contrast. Logically, it *concatenates*; that is, individual elements follow on from each other in a way that conforms to our expectations. Strong concatenation helps readers retain the sense of a lengthy passage. We'll take one more look at Katy's revised final sentence:

However, as I have demonstrated in my essay, these opposing critiques can be resolved into a view of Keats that both recognizes the influence of history on his writing and, at the same time, acknowledges the role of the transcendent poetic imagination.

This can be represented as:

X can be resolved into a view that both recognizes A and, at the same time, registers B.

The moment we read:

... that both recognizes A

we are waiting for something along the lines of:

... and does B.

There's a reassuring sense of inevitability about this essay's sentence structure. You can be sure that Katy's essay was not dashed off on the bus up to campus, and handed in on the way to the student bar. No, she read over her work carefully, having sensibly left time for the proof-reading stage; she made changes, tried different things out, weighed phrases and structures, and only then handed it in. And then went to the bar.

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## COMMON PITFALLS

Let's consider another 'summary' conclusion, this time not quite so accomplished, from a student called Mike.

The question he chose to answer was:

'For all the over-sized projections of masculinity masquerading in Mary Shelley's *Frankenstein*, the novel's male protagonists are virtual case-studies in neurosis, uncertainty, and angst.' Discuss.

Here's his final paragraph:

*Frankenstein* shows many uncertainties in the identities of the male characters as to their positions in an uncertain and changing world, where the relationship between Man and God was, through science, being constantly questioned. Through modern readings of the text the characters of Victor Frankenstein and his creation have merged and blurred as if their characters have in fact become one. The novel can therefore be said to contain its neurosis, hysteria, uncertainty, and angst in its examination of humanity, creation, and nature. Placing these uncertainties into the context of contemporary society.

To be frank, Mike, it's a bit of a mess. Whereas Katy's sentences concatenate, these don't – even though they're much shorter. We'll have to work hard to improve things.

Although one could be forgiven for not realizing it, there are two main points being made in this paragraph: (1) rapid changes in society, especially in the area of science, aroused anxieties in early nineteenth-century society; (2) Mary Shelley explores these anxieties, particularly as they affect the male characters in her novel. In order to make these points audible, we need to reduce the background noise. Let's take the first sentence:

(1) *Frankenstein* shows many uncertainties in the identities of the male characters as to their positions in an uncertain and changing world, where the relationship between Man and God was, through science, being constantly questioned.

The Force definitely wasn't with Mike when he wrote this. Felicitous it is not. To start with, the underlined bits are clumsy and repetitious. Secondly, is 'shows' at the beginning of the sentence the right word? 'Explores' or 'considers' would be



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better. And can we really say the novel shows uncertainties in the identities of the male characters? Surely the novel's male characters experience uncertainties *about* identity, which is slightly different. Finally, inexperienced writers often resort to the colloquial phrase 'as to', used in the sense of 'concerning' or 'regarding', but it seldom works satisfactorily. It is usually better to write 'concerning' or 'regarding'.

Sentence (1) needs to be rearranged along these lines:

Mary Shelley's novel considers the problem of male identity in a changing world, where rapid advances in science meant that even the relationship between Man and God was being questioned.

It's already a lot better. Moving on to the second sentence – Mike's done well to remember that 'Frankenstein' is often incorrectly assumed to be the name of the 8-foot-tall 'monster', rather than the scientist who created him:

(2) Through modern readings of the text the characters of Victor Frankenstein and his creation have merged and become blurred as if their characters have in fact become one.

But this comment is in the wrong place, since it has no logical connection with either sentence (1) or (3). Having read the whole essay, I can also tell you (as I told Mike) that the comment is also out of place because it introduces a new point (the 'merging' of characters). More on this later. To make matters worse, poor expression has rendered the interpolated material spectacularly inaccurate. Confusion over the creature's and creator's name has not occurred 'through modern readings of the text'. Quite the opposite – confusion has arisen through people *not* reading the text. No one who has read Mary Shelley's novel would confuse Victor Frankenstein with the 'monster'. Mike knows this, of course, but hasn't found a way to say it unambiguously.

To cap it all, the sentence is repetitive:

... the characters of Victor Frankenstein and his creation have merged and blurred as if their characters have in fact become one.

If two things have merged and blurred, we don't need to add that they have become one.

Let's jettison the second sentence altogether and proceed to the third:

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(3) The novel can therefore be said to contain its neurosis, uncertainty, and angst in its examination of humanity, creation, and nature.

Can we really say the novel *contains* 'neurosis, uncertainty, and angst'? Isn't it rather the case that the novel *explores* its *characters'* neuroses? Again, there is a subtle but significant difference between what Mike means and what he has actually written. The sentence should be amended to:

The novel therefore explores neurosis, uncertainty, and angst in its examination of humanity, creation, and nature.

Mike's saved his best (that is, worst) moment till last:

(4) Placing these uncertainties into the context of contemporary society.

He's only ended on an incomplete sentence. What an ignominious exit. The verb needs immediate surgery if this passage is going to make sense to anyone other than Mike:

Mary Shelley places all these uncertainties within the context of contemporary nineteenth-century society.

Let's reassemble the conclusion, bearing in mind all we've discussed so far:

Mary Shelley's novel considers the problem of male identity in a changing world, where rapid advances in science meant that even the relationship between Man and God was being questioned. The novel therefore explores neurosis, uncertainty, and angst in its examination of humanity, creation, and nature. Mary Shelley places all these uncertainties within the context of contemporary nineteenth-century society.

It's still not great – and, as one often finds, the word 'therefore' is a giveaway that the argument doesn't, in fact, flow in a particularly logical or thereforey manner. But at least we've done what we can with the material at hand, and it's grammatical now. In terms of argument, though, this conclusion couldn't punch its way out of a wet paper bag, in a tropical storm, as I'll explain.

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## INTERNAL COHERENCY AGAIN

Even in the improved version of the final paragraph, the first two sentences do not stand in particularly meaningful relationship to each other – despite the slightly desperate, and thoroughly bogus, ‘therefore’, which wouldn’t fool any tutor worth his or her salt.

Let me elucidate. The first sentence proposes that *Frankenstein* considers how males relate to ‘an uncertain and changing world’, where science is questioning ‘the relationship between Man and God’. The second shifts focus to suggest the novel ‘therefore’ explores ‘neuroses, hysteria, uncertainty, and angst’ through examining ‘humanity, creation, and nature’. There’s no logical progression here that I can discern. We haven’t arrived at the second sentence because of some point that has been clinched in the first. What’s *actually* happening is that both sentences tell us something slightly different about the novel.

Although Mike’s final paragraph is, on first glance at least, a ‘summary’ conclusion, it doesn’t really summarize an argumentative process. Mike was probably a little unsure himself about what his essay had demonstrated, and it shows in his conclusion. Consequently, the reader is left in some doubt with regard to Mike’s final position. Which brings me on to my next theme ...

## MAKING YOUR POINT CLEAR

Your tutor must feel satisfied that something has been established in your essay. You might, say, have evaluated tropes of ‘lastness’ in Author X’s novels, or analysed Artist Y’s anti-Napoleonic propaganda in the 1800s. Whatever it is (and it’s a good idea to try to put your ‘macro’-argument in a few words like I’ve just done), you need to spell ‘it’ out for your reader. Louise, who tackled the same question as Mike, achieves this level of clarity more effectively:

In this assignment, I have argued that despite appearing to privilege the male voice, *Frankenstein* actually works to undermine oppressive masculine ideologies that seek to define and silence the novel’s female characters.

Clear, purposeful sentences such as the above can make the difference between a low and high 2.1 grade.

I don’t wish to seem crotchety about Mike’s essay, and certainly not contemptuous. To adapt Kurt Vonnegut’s wonderful observation about literary critics who review

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novels, plays and poems too harshly: a marker who expresses 'rage and loathing' for a student essay is 'like a person who has put on full armor and attacked a hot fudge sundae or a banana split'. That said, the majority of Mike's mistakes arose because he hadn't read over his essay to make sure his words said exactly what he intended them to mean. He presumed I'd do the slog of working it out. Believe me, if you submit your assignment without casting a cold eye over it first, in the hope your tutor will recognize the genius beneath the muddle, you're in for a rude awakening.

### ANSWERING THE QUESTION

Another deficiency in Mike's conclusion lies in its failure to connect with the terms of the question, which you'll remember asked us to consider the proposition that even the most apparently confident male characters in *Frankenstein* are neurotic and angst-ridden:

'For all the over-sized projections of masculinity masquerading in Mary Shelley's *Frankenstein*, the novel's male protagonists are virtual case-studies in neurosis, uncertainty, and angst.' Discuss.

Although Mike mentions key words such as 'neurosis' and 'uncertainty', his conclusion does not really address the critical scope of the question. Don't forget, he's been asked to think about over-sized projections of masculinity, so his conclusion should at least make passing reference to something that could cover for an over-sized projection of masculinity on a dark night. I'm not suggesting he repeat the question verbatim in the final paragraph. There are few worse ways to end an essay than: 'and that is why I agree male characters in *Frankenstein* are "virtual case-studies in neurosis, uncertainty, and angst"'. Nevertheless, you must at least pay lip-service to the question.

I've tried to do exactly that in the following passage, which concludes an essay on 'Mary Shelley, Science, and Gender Politics':

Against a backdrop of feminist polemic, Mary Shelley associates scientific advance with stereotypical masculinity, as embodied by the ambitious Victor Frankenstein and his gigantic creature. Conversely, the victims of science are all 'homely' women such as Elizabeth and Justine, or effeminate males like Clerval and the 'girlish' William. Each of these characters is dispatched by the creature, who is the very emblem of scientific advance. Yet in spite of this schematic treatment, we should ask ourselves how

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successful Mary Shelley actually is in conflating social critique and feminist discourse. As I've contended in this essay, patriarchy's representatives, Victor, Walton, and the creature, exhibit clear symptoms of angst and neurosis, and hardly present role models of normative early nineteenth-century masculinity. Ultimately, Shelley's novel reveals that, far from being masters of their own destiny, even the ostensible protagonists of change are subject to the wider doubts and uncertainties of the age. In a sense, Mary Shelley's 'working theory' of masculine identity is refuted by her male characters themselves. Perhaps the message we should derive from *Frankenstein* is that the experience of living in an era of technological advance cuts across – still cuts across – gender boundaries, and can prove equally unsettling for men and women.

The paragraph would certainly benefit from some more tinkering, but on the whole I'm reasonably happy with it. It summarizes my larger argument, and restates the best points fairly lucidly. The reader gets my argument in 'headlines' – namely, that Shelley (1) genders society as 'feminine' and scientific advance as 'masculine'; (2) that her novel shows how the pursuit of science is personally destructive as well as socially disconsolidating; (3) that such schematic gender politics tends to simplify the lived experience of social upheaval in the Romantic period.

Stylistically, the passage earns its keep. I quite like the phrase 'against a backdrop of feminist polemic' (although I toyed with an alternative, 'from a palpably feminist perspective'). The paragraph is also tightly argued and it's internally coherent, as we can see by breaking it down into its components:

1. Mary Shelley presents scientific study, and the ambition driving it, as 'masculine',
- 2. whereas the *victims* of science are all 'feminine'.
- 3. Is Shelley successful in imposing a feminist narrative onto a social critique?
- 4. Possibly not – Shelley's schematic (science = masculine/predatory/bad, society = feminine/vulnerable/good) breaks down as the ostensibly super-'masculine' Victor and his creature turn out to be insecure, lonely, and afraid.
- 5. The novel thus offers a different message to that which Shelley intends: namely, that scientific advance is equally unsettling for men and women. If we reversed the order of any of these points, the paragraph would no longer make sense – the sure sign of a close argument.

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## ADDING NEW MATERIAL TO THE CONCLUSION

Earlier, I complained that Mike had interpolated hitherto unseen material in his conclusion. The decision to include new points in a 'summary' conclusion depends to some extent on *what* it is you wish to add, and *how* you intend to add it. Avoid anything that opens up or requires further discussion. For instance, if I added the following sentence to my own *Frankenstein* conclusion, I'd be doing myself a grave disservice:

Mary Shelley's husband Percy revised the text of *Frankenstein* substantially, and is responsible for much of the novel's elaborate Latinate rhetoric. In one sense, Percy Shelley is himself an oversized masculine presence in Mary's novel.

Interesting point. But no matter how intrinsically engaging, it has no place in my conclusion because it's too close to the principle subject of my essay for comfort. If Percy played a role in editing Mary's novel, that fact could have considerable bearing on my larger argument, and so should have been considered as a discrete point elsewhere. A more 'neutral' piece of new information with only a tangential relationship to my main themes, though, could be an effective way of drawing things to a close:

The modern world continues to struggle with its own version of technological revolution, and is regularly forced to reassess hitherto stable values. Mary Shelley's novel of science and attendant responsibility has lost none of its relevance since first publication in 1818.

## 'DISCURSIVE' CONCLUSIONS

The discursive conclusion offers scope for flair and inventiveness. This time, there's no need to worry inordinately about providing a final overview, or assiduously mapping a retrospective route through your arguments. Continue developing your ideas until you drop!

## STRIKING A TONE

I'm going to look at a highly energetic discursive conclusion from an English student called Stuart. His essay explores the cultural impact of postmodernism (don't worry about the technical terms; I'm more interested in how his conclusion is organized). I've included the last three paragraphs this time, which is where the final section of Stuart's essay begins:

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And what of the future? Since this essay has so far been broad and sweeping, it seems only fitting to sweep broadly across the future and try to foresee the fate of writing. The digital revolution has made information more accessible than ever before.

There's no longer any pressing need for reference material to be physically stored in libraries. Today's students are as likely to download their set texts onto a tablet as to purchase a physical copy. Perhaps one day 'writers' will be renamed 'typers', and literature will be 'born digital', composed and published solely in computerreadable format. This brave new world will be distressing for some. But in my view, it is the responsibility of the artist to turn his or her back on our cosy orthodoxies and assumptions, and to create afresh.

Look at Stuart go! It's all enthusiasm, verve, and brio. I love the conversational tone his passage strikes, and I really admire how he communicates so directly with the reader. The paragraph isn't only easy to read, but *fun* as well. In contradistinction to the 'summary' conclusion, there's no attempt here to pull all the essay's points together. Apart from the reference to creating afresh, which pops up at various points in Stuart's discussion, the argument about artistic responsibility and writing practices of the future is run here for the first time.

Let's not order the ticker-tape parade just yet though. In fact, there were a couple of awkward moments, which I've silently tidied up. The first sentence in the third paragraph, as things originally stood, was convoluted and poorly expressed:

This brave new world will be distressing for some, but it serves to amplify the illustration of the breaks that occur at the end of one form of art, and at the start of the next.

I also took out of the third paragraph the following space oddity:

I am used to my books, and relaxed into the present way that life operates.

'To relax into something' ... The usage is rather uncolloquial. Stuart's prose itself was perhaps too relaxed at this point. But these are minor gripes, and once those awkward moments were edited out, the shorter, snappier final paragraph is impressive.

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## THE FLOURISH

The 'flourish' is an optional element in a conclusion, a final bold statement to let your reader know the essay has ended, and ended in style. Think of it as a flamboyant bow. Or, to switch metaphors, if this writing element were a sword hilt, it would have curving quillons, an ornamental knuckle-bow, and *pas-d'âne* surmounted by shells. Effective in both summary and discursive conclusions, the flourish lends itself particularly well to the latter mode. Stuart's essay affords a good example:

... it is the responsibility of the artist to turn his or her back on our cosy orthodoxies and assumptions, and to create afresh.

A stylish end to a thoughtful and thought-provoking conclusion, which despite the odd uneven patch, any tutor would enjoy reading.

### NOTE:

1. Decide whether a discursive or summary conclusion suits your essay best.
2. Ensure your conclusion is internally coherent.
3. Check it makes sufficient connection with the terms and scope of the question.
4. Make sure you establish, and are seen to establish, a clear set of points or positions.



CHAPTER

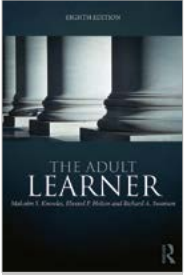
6

THEORIES OF  
LEARNING

## 6 :: THEORIES OF LEARNING

MALCOLM S. KNOWLES, ELWOOD F. HOLTON III,  
RICHARD A. SWANSON

The following is excerpted from  
*The Adult Learner: The definitive classic  
in adult education and human resource  
development, 8th Edition*



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### INTRODUCTION

Traditionally, we have known more about how animals learn than about how children learn; and we know much more about how children learn than about how adults learn. Perhaps this is because the study of learning was taken over early by experimental psychologists whose standards require the control of variables. And it is obvious that the conditions under which animals learn are more controllable than those under which children learn; and the conditions under which children learn are much more controllable than those under which adults learn. As a result, many of the "scientific" theories of learning have been derived from the study of learning by animals and children.

### PROPOSERS AND INTERPRETERS

In general, there are two types of literature about learning theory: that produced by proposers of theories (who tend to be single-minded), and that produced by interpreters of theories (who tend to be reconciliatory). Admittedly, the distinction between proposers and interpreters is not absolute. For instance, some theorists, such as Pressey, Estes, Lorge, Gagne, Hilgard, and Huhlen, have made contributions of both sorts. Below presents a historic list of the major early proposers and interpreters in the literature of learning theory. To keep the list reasonably short, we have defined "major" as those who have made the greatest impact on the thinking of others. Those making contributions of both sorts have been placed in the column representing their major work. To provide a sense of historical development, the theorists are listed more or less in the order of appearance in the evolving body of literature.

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Propounders and interpreters of learning theory

<b>Propounders</b>	<b>Interpreters</b>	<b>Propounders</b>	<b>Interpreters</b>
Ebbinghaus (1885)		Tyler (1950)	Garry (1953)
Thorndike (1898)			Koch (1954)
Angell (1896)			McKeachie (1954)
Dewey (1896)			Birren (1954)
Pavlov (1902)		Bloom (1956)	Getzels (1956)
Woodworth (1906)		Bruner (1956)	Bugelski (1956)
Watson (1907)		Erikson (1959)	Kuhlen (1957)
Judd (1908)		Crowder (1959)	Kidd (1959)
Freud (1911)		Lumsdaine (1959)	Botwinick (1960)
Kohler (1917)		Combs and Snygg (1959)	Miller (1960)
Tolman (1917)	Swanson (1996)	Ausubel (1960)	Glaser (1962)
Wertheimer (1923)		Glaser (1962)	Flavell (1963)
Koffka (1924)	Kilpatrick (1925)	Gagné (1963)	
Pressey (1926)			Hill (1963)
Guthrie (1930)	Rugg (1928)		Gage (1963)
Skinner (1931)	Hilgard (1931)		McDonald (1964)
Hall (1932)		Jourard (1964)	Goldstein (1965)
McGeoch (1932)		Suchman (1964)	Reese and Overton (1970)
Lewin (1933)		Crutchfield (1969)	Goble (1971)
Piaget (1935)		Freire (1970)	
Miller (1935)		Knowles (1970)	Holton (1998)
Spence (1936)		Tough (1971)	
Mowrer (1938)		Houle (1972)	
Katona (1940)	Bode (1940)	Dave (1973)	
Maslow (1941)	Melton (1941)	Loevinger (1976)	
Festinger (1942)	Cronbach (1943)	Cross (1976)	
Rogers (1942)	Bruner (1943)	Botwinick (1977)	Howe (1977)
Estes (1944)	Lorge (1944)	Gross (1977)	Knox (1977)
Krech (1948)		Srinivasan (1977)	
McClelland (1948)		Cropley (1980)	Chickering (1981)
Sheffield (1949)		Mezirow (1981)	Darkenwald (1982)
Underwood (1949)		Smith (1982)	Merriam (1982)
Dollard (1950)	Schaie (1953)	Wlodkowski (1985)	Brookfield (1986)
		Daloz (1986)	

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The proliferation of proposers has presented a major challenge to the interpreters in their quest to bring some sort of order to learning theories.

Researchers have exerted considerable effort in their attempts to structure the knowledge. However, no single, unified classification emerged from their early efforts.

For instance, Hilgard and Bower identify 11 categories of theories, McDonald identifies 6, and Gage names 3. Hilgard and Bower's (1966) 11 categories are:

- Connectionism (Thorndike)
- Classical conditioning (Pavlov)
- Contiguous conditioning (Guthrie)
- Operant conditioning (Skinner)
- Systematic behavior theory (Hull)
- Purposive behaviorism (Tolman)
- Gestalt theory (Koffka and Kahler)
- Psychodynamics (Freud)
- Functionalism
- Mathematical learning theory
- Information processing models.

McDonald (1964) breaks the theories down into six categories in his analysis:

- Recapitulation (Hull)
- Connectionism (Thorndike)
- Pragmatism (Dewey)
- Gestalt and field theory (Ogden, Hartman, Lewin)
- Dynamic psychology (Freud)
- Functionalism (Judd).

Gage (1972) identifies three families of learning theories:

- (1) Conditioning
- (2) Modeling
- (3) Cognitive

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Kingsley and Garry (1957) provide two sets:

- (1) Association or stimulus–response (Thorndike, Guthrie, and Hull)
- (2) Field theories (Lewin, Tolman, and the Gestalt psychologists)

Taba (1962, p. 80) agrees with the two-family set, but uses different labels:

- (1) Associationist or behaviorist theories
- (2) Organismic, gestalt, and field theories

These exhibits profile some of the debate in arranging the disparate categories of theories into a definitive pattern.

Learning theories primarily fall into two major families: behaviorist/ connectionist theories and cognitive/gestalt theories, but not all theories fit clearly into these two families. The behaviorist theories include such diverse theories as those of Thorndike, Pavlov, Guthrie, Skinner, and Hull. The cognitive theories include at least those of Tolman and the classical gestalt psychologists. The theories of functionalism, psychodynamics, and the probabilistic theories of the model builders do not completely and clearly fit. The distinctions between the two families of theories are not based only on differences within learning theories; there are other specific issues upon which theories within one family may differ (Hilgard and Bower, 1966).

Obviously, the interpreters continue to struggle in organizing the field of learning theories in a really fundamental way. In 1970, two developmental psychologists, Hayne W. Reese and Willis F. Overton, presented a way to conceptualize the theories in terms of broader models: the mechanistic or elemental model and the organismic or holistic model.

### CONCEPTS OF ELEMENTS AND WHOLES

“Any theory presupposes a more general model according to which the theoretical concepts are formulated” (Reese and Overton, 1970). The most general models are the world views that constitute basic models of the essential characteristics of humankind and ultimately the nature of learning.

Two systems that have been pervasive in both the physical and the social sciences are the elemental world view (the basic metaphor of which is the machine) and the holistic world view (the basic metaphor of which is the organism—the living, organized system presented to experience in multiple forms).

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### World views or metaphysical systems

<i>Elemental model</i>	<i>Holistic model</i>
Represents the universe as a machine, composed of discrete pieces operating in a reactive spatio-temporal field: reactive and adaptive model of man	Represents the world as a unitary, interactive, developing organism: active and adaptive model of man

The elemental model represents the universe as a system composed of discrete pieces. These pieces—elementary particles in motion—and their relations form the basic reality to which all other more complex phenomena are ultimately reducible. When forces are applied in the operation of the system, a chain-like sequence of events results. Since these forces are the only efficient or immediate causes of the events in principle, complete prediction is possible, and susceptible to quantification (Reese and Overton, 1970).

The holistic model represents the universe as a unitary, interactive, developing organism. It perceives the essence of substance to be activity, rather than the elementary particle. From such a point of view, one element can never be like another. As a consequence, it is the diversity that constitutes the unity (Reese and Overton, 1970).

The whole is therefore organic rather than mechanical in nature. “The nature of the whole, rather than being the sum of its parts, is presupposed by the parts and the whole constitutes the condition of the meaning and existence of the parts” (Reese and Overton, 1970). Thus, the possibility of a predictive and quantifiable universe is precluded. When applied to the sphere of epistemology and psychology, this world view results in an inherently and spontaneously active organism model of humans. It sees people as an active organism rather than a reactive organism, as a source of acts rather than as a collection of acts initiated by external forces. It also represents individuals as an organized entity, a configuration of parts which gain their meaning, their function, from the whole in which they are imbedded. From this point of view, the concepts of psychological structure and function, or means and ends, become central rather than derived. Inquiry is directed toward the discovery of principles of organization, toward the explanation of the nature and relation of parts and wholes, structures and functions, rather than toward the derivation of these from elementary processes.

The individual who accepts this model will tend to emphasize the significance of processes over products and qualitative change over quantitative change. In addition, he/she will tend to emphasize the significance of the role of experience in facilitating

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or inhibiting the course of development, rather than the effect of training as the source of development (Reese and Overton, 1970).

With this and the preceding set of concepts as a frame of reference, what follows is a brief examination of the theories about learning derived from the study of learning in animals and children.

### THEORIES BASED ON AN ELEMENTAL MODEL

While John B. Watson (1878–1958) is considered the father of behaviorism, Edward L. Thorndike (1874–1949) conducted the first systematic investigation in the US of the phenomenon we call learning. It was a study of learning in animals, which was first reported in his *Animal Intelligence* in 1898.

Thorndike perceived inexperienced learners to be empty organisms who more or less responded to stimuli randomly and automatically. A specific response is connected to a specific stimulus when it is rewarded. In this situation, the stimulus, S, is entirely under the control of the experimenter (or teacher), and in large measure so is the response, R; for all the experimenter has to do to connect the particular R to a particular S is to reward the R when the organism happens to make it. This association between sense impressions and impulses to action came to be known as a bond or a connection. Thus, Thorndike's learning theory has sometimes been called bond psychology or connectionism, and was the original stimulus–response (or S–R) psychology of learning.

Thorndike developed three laws that he believed governed the learning of animals and human beings:

1. The law of readiness (the circumstances under which a learner tends to be satisfied or annoyed, to welcome or to reject).
2. The law of exercise (the strengthening of connections with practice).
3. The law of effect (the strengthening or weakening of a connection as a result of its consequences).

In the course of his long and productive life, and with help from many collaborators, both friendly and critical, Thorndike's learning theory became greatly refined and elaborated. It provided the foundation of the behaviourist theories of learning.

While Thorndike conducted his work on connections in the US, the Russian physiologist Ivan Pavlov (1849–1936) conducted his experiments which resulted in

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the concept of conditioned reflexes. Hilgard and Bower (1966) describe his classical experiment:

When meat powder is placed in a dog's mouth, salivation takes place; the food is the unconditioned stimulus, and salivation is the unconditioned reflex. Then some arbitrary stimulus, such as a light, is combined with the presentation of the food. Eventually, after repetition and if time relationships are right, the light will evoke salivation independent of the food; the light is the conditioned stimulus and the response to it is the conditioned reflex.

Pavlov's work resulted in a system that has been termed classical conditioning. This is to distinguish it from later developments in instrumental conditioning and operant conditioning. In his learning theory, he developed several concepts and accompanying techniques that have since been incorporated into the behaviorist thinking. These concepts are reinforcement, extinction, generalization, and differentiation. In reinforcement, a conditioned reflex becomes fixed by providing the conditioned stimulus and following it repeatedly with the unconditioned stimulus and response at appropriate time intervals. Extinction occurs when reinforcement is discontinued and the conditioned stimulus is presented alone, unaccompanied by the unconditioned stimulus. The conditioned response gradually diminishes and disappears. It becomes "extinct." In generalization, a conditioned reflex evoked to one stimulus can also be elicited by other stimuli, not necessarily similar to the first. A fourth basic concept Pavlov developed was differentiation. In differentiation, the initial generalization is overcome by the method of contrasts in which one of a pair of stimuli is regularly reinforced and the other is not; in the end, the conditioned reflex occurs only to the positive (reinforced) stimulus and not to the negative (non-reinforced) stimulus.

The behaviorists have a common conviction that a science of psychology must be based on a study of that which is overtly observable: physical stimuli, the muscular movements and glandular secretions which they arouse, and the environmental products that ensue. The behaviorists have differed among themselves as to what may be inferred in addition to what is measured, but they all exclude self-observation (Hilgard and Bower, 1966).

Watson placed emphasis on kinesthetic stimuli as the integrators of animal learning; and, applying this concept to human beings, conjectured that thought was merely implicit speech—that sensitive-enough instruments would detect tongue movements or other movements accompanying thinking.



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Edward R. Guthrie (1886–1959) built on the works of Thorndike, Pavlov, and Watson; and added the principle of contiguity of cue and response. He stated his only law of learning, “from which all else about learning is made comprehensible,” as follows: “A combination of stimuli which has accompanied a movement will on its recurrence tend to be followed by that movement” (Hilgard and Bower, 1966). In his later work, Guthrie placed increasing emphasis on the part played by the learner in selecting the physical stimuli to which it would respond; hence, the attention or scanning behavior that goes on before association takes place became important.

Guthrie’s learning theory was further clarified and formalized by his students, Voeks and Sheffield; but the next major advance in behaviourist psychology was the result of the work of B. F. Skinner and his associates. It is from their work that the educational technology of programmed instruction and teaching machines so popular in the 1960s were derived.

Another development in behaviorist psychology occurring during the middle decades of the twentieth century was the construction of Clark L. Hull’s systematic behavior theory, and its elaboration by Miller, Mowrer, Spence, and others. Hull’s contribution is a conceptual descendant of Thorndike’s theory. He adopted reinforcement as an essential characteristic of learning. Hull constructed an elaborate mathematico-deductive theory revolving around the central notion that there are intervening variables in the organism that influence what response will occur following the onset of a stimulus. He developed 16 postulates regarding the nature and operation of these variables, and stated them in such precise terms that they were readily subjected to quantitative testing. Hilgard and Bower’s (1966) assessment of the effect of Hull’s work follows:

It must be acknowledged that Hull’s system, for its time, was the best there was—not necessarily the one nearest to psychological reality, not necessarily the one whose generalizations were the most likely to endure—but the one worked out in the greatest detail, with the most conscientious effort to be quantitative throughout and at all points closely in touch with empirical tests. ... Its primary contribution may turn out to lie not in its substance at all, but rather in the ideal it set for a genuinely systematic and quantitative psychological system far different from the schools which so long plagued psychology.

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Undoubtedly, Hull's work also stimulated the rash of mathematical models of learning that were developed after 1950 by Estes, Burke, Bush, Mosteller, and others. It should be pointed out that these are not themselves learning theories, but mathematical representations of substantive theories.

### THEORIES BASED ON A HOLISTIC MODEL

John Dewey, in 1896, launched the first direct protest against the elemental model of the associationists. Although his work falls into the category of educational philosophy rather than learning theory, his emphasis on the role of interest and effort and on the child's motivation to solve his or her own problems became the starting point for a line of theorizing that has been given the label functionalism. Translated into schoolroom practices, functionalism provided the conceptual basis for progressive education, which as Hilgard and Bower (1966) state, "at its best was an embodiment of the ideal of growth toward independence and self-control through interaction with an environment suited to the child's developmental level".

The spirit of experimentalism fostered by functionalism is reflected in the work of such learning theorists as Woodworth, Carr, McGeogh, Melton, Robinson, and Underwood. The essence of functionalism is summarized by Hilgard and Bower (1966):

1. The functionalist is tolerant but critical.
2. The functionalist prefers continuities over discontinuities or typologies.
3. The functionalist is an experimentalist.
4. The functionalist is biased toward associationism and environmentalism.

The most complete break with behaviorism occurred at the end of the first quarter of the twentieth century with the importation of the notion of insight learning in the gestalt theories of the Germans Wertheimer, Koffka, and Kohler. These theorists took issue with the proposition that all learning consisted of the simple connection of responses to stimuli; insisting that experience is always structured, that we react not just to a mass of separate details, but to a complex pattern of stimuli. We also need to perceive stimuli in organized wholes, not in disconnected parts. The learner tends to organize his or her perceptual field according to four laws:

1. *The law of proximity.* The parts of a stimulus pattern that are close together or near each other tend to be perceived in groups; therefore, the proximity of the parts in time and space affects the learner's organization of the field.

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2. *The law of similarity and familiarity.* Objects similar in form, shape, color, or size tend to be grouped in perception; familiarity with an object facilitates the establishment of a figure-ground pattern. (Related to this law is the gestaltists' view of memory as the persistence of traces in the brain that allows a carryover from previous to present experiences. They view these traces not as static, but as modified by a continual process of integration and organization.)
3. *The law of closure.* Learners try to achieve a satisfying endstate of equilibrium; incomplete shapes, missing parts, and gaps in information are filled in by the perceiver. [Kingsley and Garry (1957) observe that "closure is to Gestalt psychology what reward is to association theory".]
4. *The law of continuation.* Organization in perception tends to occur in such a manner that a straight line appears to continue as a straight line, a part circle as a circle, and a three-sided square as a complete square.

Gestalt psychology is classified by most interpreters as within the family of field theories, which are theories that propose that the total pattern or field of forces, stimuli, or events determine learning.

Kurt Lewin (1890–1947) developed what he referred to specifically as a field theory. Using the topological concepts of geometry, Lewin conceptualized each individual as existing in a life-space in which many forces are operating. The life-space includes features of the environment to which the individual reacts: such as material objects encountered and manipulated; people met; and private thoughts, tensions, goals, and fantasies. Behavior is the product of the interplay of these forces, the direction, and relative strength of which can be portrayed by the geometry of vectors. Learning occurs as a result of a change in cognitive structures produced by changes in two types of forces: (1) change in the structure of the cognitive field itself; or (2) change in the internal needs or motivation of the individual. Because of its emphasis on the immediate field of forces, field theory places more emphasis on motivation than on any of the preceding theories. Lewin felt that success was a more potent motivating force than reward, and gave attention to the concepts of ego involvement and level of aspiration as forces affecting success. He saw change in the relative attractiveness of one goal over another, which he called valence, as another variable affecting motivation. Since some of the strongest forces affecting an individual's psychological field are other people, Lewin became greatly interested in group and institutional dynamics; and as you will see later, it is in this dimension of education that his strongest influence has been felt.

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Developments in the field-theory approach have appeared under several labels: phenomenological psychology, perceptual psychology, humanistic psychology, and third-force psychology. Since the bulk of the work with this approach has been with adults, major attention to it will be reserved for a later section. Since phenomenologists are concerned with the study of the progressive development of the mind, or as our contemporaries would insist, the person, they see humans as organisms forever seeking greater personal adequacy. The urge for self-actualization is the driving force motivating all human behavior.

Two phenomenologists, Arthur Combs and Donald Snygg, have focused on the learning of children and the role of their educators, and their findings have important implications for learning theories. The flavor of Combs and Snygg's learning theory can be caught from statements from Pittenger and Gooding (1971):

A person behaves in terms of what is real to him or her and what is related to his or her self at the moment of action.

Learning is a process of discovering one's personal relationship to and with people, things, and ideas. This process results in and from a differentiation of the phenomenal field of the individual.

Further differentiation of the phenomenological field occurs as an individual recognizes some inadequacy of a present organization. When a change is needed to maintain or enhance the phenomenal self, it is made by the individual as the right and proper thing to do. The role of the teacher is to facilitate the process.

Given a healthy organism, positive environmental influences, and a nonrestrictive set of percepts of self, there appears to be no foreseeable end to the perceptions possible for the individual.

Transfer is a matter of taking current differentiations and using them as first approximations in the relationship of self to new situations.

Learning is permanent to the extent that it generates problems that may be shared by others and to the degree that continued sharing itself is enhancing.

In a sense, Edward C. Tolman (1886–1959) represents a bridge between the elemental and the holistic models. His system was behavioristic in that he rejected introspection as a method for psychological science; but it was molar rather than molecular behaviorism—an act of behavior has distinctive properties all of its own, to be identified and described irrespective of the muscular, glandular, or neural processes that underlie it. But, most importantly, he saw behavior as purposive, being regulated in accordance with objectively determined ends. Purpose

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is, of course, an organismic concept. Tolman rejected the idea that learning is the association of particular responses to particular stimuli. In contrast to the associationists, who believed that it is the response or sequence of responses resulting in reward that is learned, Tolman believed it is the route to the goal that is learned. He believed that organisms, at their respective levels of ability, are capable of recognizing and learning the relationships between signs and desired goals; in short, they perceive the significance of the signs (Kingsley and Garry, 1957). Tolman called his theory purposive behaviorism.

### CHILD LEARNING

Two other later psychologists, Jean Piaget and Jerome Bruner, have had great impact on thinking about learning, although they are not literally learning theorists. Their focus is on cognition and the theory of instruction. Piaget has conceptualized the process of the development of cognition and thought in evolutionary stages. According to Piaget, the behavior of the human organism starts with the organization of sensory-motor reactions, and becomes more intelligent as coordination between the reactions to objects becomes progressively more interrelated and complex. Thinking becomes possible after language develops, and with it a new mental organization. This development involves the following evolutionary periods (Piaget, 1970)

1. *The formation of the symbolic or semiotic function* (ages 2 to 7 or 8). The individual is able to represent objects or events that are not at the moment perceptible by evoking them through the agency of symbols or differentiated signs.
2. *The formation of concrete mental operations* (ages 7 or 8 to 11 or 12). Characteristic of this stage are the linking and dissociation of classes; the sources of classification; the linking of relations; correspondences, and so on.
3. *The formation of conceptual thought or formal operations* (ages 11 or 12 through adolescence). "This period is characterized by the conquest of a new mode of reasoning, one that is no longer limited exclusively to dealing with objects or directly representable realities, but also employs hypotheses."

Some reservations have been expressed about the rigid age scale and minimization of individual differences in Piaget's schema; but his conception of evolutionary stages adds a dimension that is not generally given much attention in the established learning theories.

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Jerome Bruner has also been interested in the process of intellectual growth, and his benchmarks were described in Chapter 2. His main interest, however, has been in the structuring and sequencing of knowledge and translating this into a theory of instruction. However, Bruner does have a basic theory about the act of learning, which he views as involving three almost simultaneous processes: (1) acquisition of new information, which is often information that runs counter to or is a replacement of what the person has previously known but which, at the very least, is a refinement of previous knowledge; (2) transformation, or the process of manipulating knowledge to make it fit new tasks; and (3) evaluation, or checking whether the way the person manipulated information is adequate to the task (Bruner, 1960, pp. 48–49). We shall return to this theory of instruction in a later chapter.

The main criticism of Piaget, Bruner, and other cognitive theorists by other adherents to the holistic model is that they are unbalanced in their overemphasis on cognitive skills at the expense of emotional development; that they are preoccupied with the aggressive, agentic, and autonomous motives to the exclusion of the homonymous, libidinal, and communal motives; and that they concern themselves with concept attainment to the exclusion of concept formation or invention (Jones, 1968).

In the years following Piaget's pronouncements, new avenues opened in such learning-related fields of inquiry as:

- neurophysiology (M. Boucouvalas, K. H. Pribram, G. A. Miller, J. E. Delefrasny, H. E. Harlow, D. P. Kimble, W. G. Walter, D. E. Wooldridge, J. Z. Young);
- mathematical modeling (R. C. Atkinson, R. R. Bush, W. K. Estes, R. D. Luce, E. Restle);
- information processing and cybernetics (H. Borko, E. A. Feigenbaum, B. E. Green, W. R. Reitman, K. M. Sayre, M. Yovitts, J. Singh, K. O. Smith);
- creativity (J. P. Guilford, R. P. Crawford, J. E. Drevdahl, A. Meadow, S. J. Parnes, J. W. Getzels, P. W. Jackson); and
- ecological psychology (R. G. Barker, P. V. Gump, H. E. Wright, E. P. Willems, H. L. Raush).

### SUMMARY

Learning theory literature falls into two general types: that produced by proposers and that produced by interpreters. Many proposers of theories have made a concerted effort to impose order on the system of learning theory. Among these are Hilgard and Bower, McDonald, and Gage. It was Reese and Overton, however, who

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successfully conceptualized the theories within a larger construct—the concept of models of development. Reese and Overton postulated that “any theory presupposes a more general model according to which the theoretical concepts are formulated.” Building on this premise, they developed the *elemental model* and the *holistic models* of individuals. Among the theories based on the elemental model are Thorndike’s connectionism, Pavlov’s classical conditioning, and Watson’s behaviorism. Other theories within this category were those developed by Guthrie, which resulted both in the principle of contiguity of cue and response and an emphasis on the importance of attention behavior. It was Guthrie’s work that spawned additional research by Voeks, Sheffield, Skinner, and Hull’s systematic behavior theory. Behaviorism was uniquely American, and mirrored the philosophy of the turn-of-the century notion that all people could achieve great accomplishments given the opportunity (stimulus), individual initiative (response), and fair treatment (rewards).

Paralleling this effort were the holistic models. It was Dewey’s work that initiated a line of theorizing called functionalism. Tolman, however, bridged the gap between cognitive and behavioral psychologies with a theory that he called purposive behaviorism. Gestalt theories, classified by most interpreters as within the family of field theories, paralleled behaviorism. The notable field theories in which Lewin was intensely interested—group and institutional dynamics—greatly influenced this educational dimension.

Recent developments in the field-theoretical approach have appeared under the labels of phenomenological psychology, perceptual psychology, humanistic psychology, and cognitive psychology.

### REFLECTION QUESTIONS

- Speculate as to why so many learning theories have been created.
- What is the value of thinking of wholes and parts as they relate to learning?
- What are some of the important points derived from elemental model learning theories?
- What are some of the important points derived from holistic model learning theories?