



SMART THINKING

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There is an inner logic, and we're taught to stay far from it
It is simple and elegant, but it's cruel and antithetic
And there's no effort to reveal it ...

BAD RELIGION, 'INNER LOGIC'¹

WHAT IS SMART THINKING?

There are many words associated with what is, loosely, termed ‘thinking’. We are often told to ‘think about the issues’, to ‘analyse in more depth’, to ‘use reasoning’, or to ‘be rational’. Sometimes (perhaps with reference to computers, or to the legendary *Star Trek* character Mr Spock) we are told to ‘be logical’. Often students are told that they must think ‘critically’ if they are to succeed. When people write essays or reports, they are usually advised to make sure that they have a good ‘argument’ or that they ‘explain in detail’. But do students (and lecturers) really know what these words and phrases mean? Can we actually identify the key skills and underlying techniques that allow us to think better?

The answer is yes. Smart thinking means knowing how to:

- work out and express your main ideas
- plan your communication of ideas so that they can be clearly understood
- check to see if you have covered all the important parts of your topic
- establish a framework or structure in which your basic facts and evidence make sense
- present ideas by linking them together to convince readers of your conclusion.

Moreover, we must also relate thinking to knowledge and information (what we think about), and the processes of communicating our ideas, either in written or oral form. Thinking is one aspect of an integrated process of finding, analysing, and communicating information. Your thinking begins even when you are deciding ‘what’ to read and write about.

‘Smart thinking’ can assist you in:

- working out where and how to look for the information you need
- understanding that information in relation to your own work
- deciding which information is relevant to your topic and which is not
- identifying when you need to find out more information to make sense of a problem.

Smart thinking can also improve your capacity to set your communication in context. It alerts you to the importance of:

- your audience and their expectations of what you are doing
- the requirements upon you to communicate in a certain way in a certain situation
- your own assumptions and biases, and the role of society in forming those biases, which will need to be considered and explored through your communication.

To think smart, you must use reasoning. Reasoning is the basis of much of our thinking. It is often described simply as the process of thinking through and communicating our reasons for holding certain views or conclusions.

Reasoning is, however, better defined as a process of understanding and exploring the relationships between the many events, objects, and ideas in our world. None of these individual ‘items’ can be meaningful in and of itself. An item can *only* be understood in relation to other ones. Reasoning enables us to get beyond a world of innumerable separate events, objects, and ideas. Using reasoning, we see that all these separate items are interconnected, and what we know about any particular object depends on our knowledge of *other* objects. Sometimes the connections are obvious; other times, they are much harder to see. Reasoning involves finding and expressing these connections or relationships so that each individual event, object, or idea is explicable in terms of other events, objects, or ideas.

EXERCISE

Smart thinking demands that we do more than just ‘think’ vaguely about things. Before we look at reasoning, the key underlying process of thinking, let’s consider some common ‘informal’ ideas about thinking. Look at the four actions listed below and, writing on a piece of paper, list some examples in your own life of when you have successfully done these actions and why you did them. The answers contain more discussion of each one.²

- Ask questions (of ourselves and others)
- Seek out information
- Make connections
- Interpret and evaluate



REASONING

Reasoning represents one of the great advances that human beings have made in their ability to understand and make sense of the world. It has been described as a ‘complex weave of abilities that help you get someone else’s point, explain a complicated idea, generate reasons for your viewpoints, evaluate the reasons given by others, decide what information to accept or reject, see the pros as well as the cons and so forth.’³ Yet it is also the case that reasoning does not come naturally but must be learnt and can be improved.

Let us begin with an easy example. Imagine you hold an apple in one hand and an orange in the other. Now, at first sight, these two objects appear to be completely different; each would seem to be understandable only in its own terms—that is, in a way unique to each apple and each orange. However, we are

better able to understand them and to communicate what we think about them when we start to make connections. Here are some examples:

- An apple is not an orange.
- An apple and an orange are similar: both are pieces of fruit.
- This apple will be, roughly speaking, the same as all the other apples I have eaten.
- If I eat this orange and I like the taste, then I can assume that generally I will like the taste of other oranges.
- You should eat this fruit because you are hungry.

Obviously, this list makes only a few simple connections between the two *particular* pieces of fruit that we are considering; it also makes a few connections between the orange and the apple and other pieces of fruit *generally*; and the latter connections relate fruit to people.

If we did not make these connections, then every time we ate an orange, for example, it would be a new experience. We would not be able to rely on past experience or on our experiences with other things; nor would we be able to make any predictions about future experience. Such a world might be interesting (as each morning you drank your orange juice and had a whole new experience), but it would also be extremely confusing. Moreover, if you think about a more complex example (say, deciding to study for a university degree) you can see that, without the ability to make connections between things, you would not be able to make your decision in the way that all of us take for granted (by thinking, for example, ‘A university degree will help me get a better job’). When we start to make connections, we are able to know things of which we have no direct experience (and which may not yet have happened). Of course, since we live in a society in which reasoning is accepted as the main method of processing information, we already use reasoning, but we usually do not think about it.

Often, we can feel reasonably certain about our knowledge because it is based on evidence of things that we *do* know about. For example:

In the past, when driving down the freeway after work, I have found that there is usually a traffic jam. Because of the traffic jam, it always takes a long time to get home. So, today, because I need to get home quickly, I had better leave work earlier.

The conclusion that ‘I had better leave work earlier’ *follows from* the evidence or reasons given for it. We can say that it is a ‘reasonable’ conclusion. Using reasoning requires us to look for and rely on structures of connections between separate things or events in the world; it also requires us to make an active effort to create these structures—to make the connections that we cannot easily see.

The two main kinds of relationships that underpin these structures are:

- how things relate to one another, at any given moment (syntagmatic relationships such as ‘an orange is a citrus fruit’ or ‘citrus fruits are edible’)

- how things relate to one another, over time (paradigmatic relationships such as ‘eating too many oranges made me feel sick’ or ‘if I want vitamin C, then I should eat an orange’).

Working out the precise relationship requires attention to a number of ‘patterns’ that might help us to see how one thing is linked to another. These patterns can be understood through concepts such as:

- similarity/difference
- commonality/inconsistency
- necessity and sufficiency.

When we make these connections, we are able to function much more effectively and to make sense of the world around us. In particular, we are more capable of communicating our ideas and discussing knowledge with other people.

The things, then, that we do with reasoning, as a form of communication, are:

- *arguing* (‘You should not believe what you see on television because ... ’)⁴
- *explaining* (‘Digital television has been introduced because ... ’)
- *making decisions* (‘I think we should buy a digital television receiver because ... ’)
- *predicting the future* (‘I expect digital television to make pay television better because ... ’)
- *exploring issues* (‘How will digital television link to the Internet?’)
- *finding answers* (‘Why did the government decide on a higher-quality digital television standard?’)
- *justifying actions* (‘When first introduced, I thought subscribing to pay television was not a good idea because ... ’).

So, smart thinking is about reasoning, which is about the use and communication of knowledge. Researching, reading, analysing, testing, checking, planning, and writing all depend on understanding those interrelationships. Once you understand that knowledge consists of innumerable interrelations between small ‘bits’ of information, then you will be able to find, shape, and use knowledge for yourself.

But reasoning is also about people: the authors and audiences of arguments, explanations, and so on. And it is in relation to the human, social aspect of reasoning that we must really be ‘smart’. Reasoning is *not* just formal logic; nor is it an abstract way of thinking about ideas. It is always a social act. People always use reasoning for particular purposes (be they economic, political, or whatever). They all have different perspectives on the issues being debated. Their age, class, race, gender, and ethnicity all influence the broad structures upon which they rely in reasoning. If we forget that reasoning has this social aspect, then we will run the risk of failing to think effectively (this point will be explored in more detail in later chapters). The connections and relations between ideas, events, proposals, and so on only become meaningful in the context of how, when, where, and why they are communicated with others.

HOW DO WE STUDY SMART THINKING?

THINKING ABOUT THINKING

Reasoning is something we already do: all of us have learnt, in one way or another, to think and to reason, to make connections and see relationships between various events and attitudes in our world. So, being a smart thinker is not about becoming a different sort of person, but about *improving* skills that you already have. The way to achieve this goal (and the main emphasis within this book) is to become explicitly aware of the analytical processes involved in reasoning. If you do, then you will be able to analyse complex issues more deeply, understand and process information more effectively, and communicate your ideas convincingly.

In succeeding chapters, then, we will learn a way of talking and thinking about reasoning that allows us to understand and use reasoning better. In particular, we will learn about the ‘analytical structure’ of ideas, which is, essentially, the clearest expression of reasoning. However, we usually encounter such structures ‘embedded’ in the words we read and hear, or in so-called ‘natural language’. We must learn to distinguish more effectively between the structures and the natural language through which it comes to us. We will also encounter the idea of ‘analytical questions’, which can guide the way we think about and develop the relationships that comprise our analytical structures.

THINKERS WITH ATTITUDE

Remember, smart thinking always has a social dimension: we humans are doing the reasoning. As a result, one of the key ingredients of successful thinking and analysis, and of the effective use of reasoning, is our own attitude. For most (if not all) of us, our knowledge will usually consist of both the basic information or ‘facts’ we know, as well as a framework or structure of broader ideas with which we interpret these facts. Many of us are quite capable of assimilating and ‘knowing’ the facts, but smart thinkers constantly assess their structures and frameworks. In the process, they develop a much deeper and more effective appreciation of situations and events. Smart thinkers can be confident in their reasoning, precisely because they do not rely on too many unexamined or unquestioned assumptions.

First of all, we should always be willing to reflect on our own views and positions—to scrutinise the way we think about the world. We might ask ourselves, from time to time:

- Are my views consistent with one another?
- What assumptions underpin my views?
- Am I open to new ideas and alternative conclusions?
- Can I look at this issue from another perspective?

We should also be constantly asking ourselves, in relation to the issues that matter to us:

- Why did this happen?
- What should we do next?
- What does it mean?

As we will see, questioning is the key analytical skill that enables us to develop complex knowledge about the world in the form of structures of related ideas, so as to communicate with other people.

It is not the answers to these questions that matter, but the very fact that we ask them of ourselves, the willingness not to ‘take things for granted’ or to be satisfied with the ‘obvious answer’. Indeed, a great failure of our society is that, by and large, we are people who believe that someone has the answer and all we have to do is develop a clever way of finding that answer. In fact, the key skill that you need, to be an effective and thoughtful adult who is able to engage with and understand the world, is *not* an ability to find the answers: it is the ability to *ask the right questions*. If you can ask the right questions, then most of the answers will come very easily. Moreover, you will also be able to determine why others do not necessarily accept *your* answers but have their own views. Questions are fundamental to reasoning.

EXERCISE

4.2

On a piece of paper, write down a key issue that you are dealing with at the moment—at work, perhaps an assignment, or something significant to you; don’t choose a matter that is personal and emotional since these are often best analysed in different ways. Then start to ask yourself, in your mind, questions that will help to analyse that issue. As you go, write them down on the page, review them, and add more questions. Try to ask questions that are prompted by the first questions you thought of, questions that ‘connect’ the dots between the issue and another question.

WHY DO WE NEED TO ‘THINK SMART’?

Basically, unless we are smart thinkers, we cannot understand the world as well as we should; we cannot solve problems effectively and consistently; we cannot be successful in the areas of our life that concern information. Knowledge is the ‘stuff’ of everyday life in the early twenty-first century. We are always being asked to find it out, develop it, communicate it, and think about it. Smart thinking improves the ways in which we can work with knowledge and information.

First of all, smart thinking *helps you to study*. All academic work requires the use of reasoning. You want to understand the content, to digest information, pick out the key issues to learn, grasp the underlying concepts, and come to terms with unfamiliar ideas: reasoning is the way to go. Most teachers look for reasoned explanations and arguments when marking assignments. More importantly, by using smart-thinking skills to understand context—the situations in which we learn and communicate knowledge—you can understand the system you are in, the expectations and requirements on you as students, and then fulfil those requirements.

Second, smart thinking *helps you at work*. Work is, by and large, about decision making. It involves initiating change, coping with new and unfamiliar situations, finding better ways of doing things, finding out crucial information, understanding the people and institutions you work with, and solving complex problems. You use reasoning to accomplish these tasks, and if you have smartened up your thinking, then you will have more confidence in your abilities and succeed more often. In particular, the insights gained through smart thinking will assist in promoting more effective communication. Such communication is essential to successful business and professional life.

Third, and perhaps most importantly, smart thinking *makes you an active member of communities*. We are all members of various local and national groups and communities. While our membership of these communities gives us certain rights (for example, the rights of citizenship), it also entails certain responsibilities. It is our responsibility to understand what is happening in society and to act where necessary to conserve or change, to get involved, to make things better, and to fight injustice. We can only pick our way through the complex tangle of opinions, assertions, ideas, and assumptions that make up the dominant social world in which we live *if* we use the skills of smart thinking. Otherwise we are just going to be swept along without any control over events, a situation that is unhelpful for us as individuals but worse for the overall community, to which we owe the responsibilities that come with our rights.

Moreover, as the neo-punk band Bad Religion sing, there is an inner logic to the events that surround and involve us and, very often, we *are* taught to stay far from it. We often think that the best way to live our lives is to stay out of the way. As the song ‘Inner Logic’ continues: ‘don’t ask questions, don’t promote demonstration/don’t look for new consensus/don’t stray from constitution’. There are two equally undesirable extremes in this refusal to think things through. At one extreme, staying away from the ‘logic’ means putting too much faith in so-called ‘scientific’, ‘objective’ knowledge (which appears as if it can never be questioned). At the other extreme, we shy away from complexity by putting too much reliance on individual relativism, in which each person’s opinion is thought to be as good as anyone else’s. We should never assume that there can be only *one* right view; we should not, in turn, presume that *all* views are right.

We *do* need to make the ‘effort to reveal’ the logic, to ‘pierce the complexity’, not only for ourselves but for the common good. Smart thinking is how to

do it. Generally, knowledge is tied up in contexts of power and influence, and is hardly ever ‘objective’ or ‘neutral’. Smart thinking can help empower us in the face of knowledge, revealing its political and social purposes, its biases and consequences, its exclusions and errors. Thinking smart is about recognising the contexts of power and influence in which knowledge exists. Thinking smart is about using knowledge within and against the constraints of these contexts. It also always involves remembering that our own reasoning may equally involve the exercise of power and of influence.⁵

REVIEW EXERCISE

There is no review exercise for this chapter—move on to chapter 2. Also, there is no need to do a concept check now. When you have finished the book, however, return to this chapter and revise it. I am sure you will read it with a very different perspective.

NOTES

- 1 From *Bad Religion*, *Stranger than Fiction* (compact disc), Dragnet, 1994, MATTC003.
- 2 Developed from Josina M. Makau, *Reasoning and Communication: Thinking Critically about Arguments*, Wadsworth, Belmont, CA, 1990.
- 3 Stephen Toulmin, Richard Rieke, and Allan Janik, *An Introduction to Reasoning*, Macmillan, New York, 1984, p. 6.
- 4 An argument, here, does not mean a ‘fight’ or ‘dispute’ but is the technical name for reasoning that seeks to establish a conclusion on the basis of reasons.
- 5 These issues—objectivity, relativism, and so on—are complex. We will encounter them again in later chapters (chapters 6, 8, and 9). You should also be aware that there are legitimate differences of opinion on these matters among intellectuals.