Some introductory remarks on academic practices and skills

I do not wish to get too bogged down in definitions in these remarks. (I will return to this point in some later notes.) For now, I wish to proceed on the basis that we can all agree that universities have always been regarded as places in which learning takes place and places that are intimately connected with knowledge. I hope this will not make anyone feel uneasy that they are being asked to proceed on a basis that may be incorrect, false or misleading.

Most of my remarks in this short note are to do with knowledge and academic practices, and less will be said about learning.

Knowledge

You may well think mainly about what is in people's heads when you come across any mention of the word *knowledge*. After all, universities are believed to be places filled with knowledgeable people, and students are thought of as people who go to university to gain knowledge. However, a few moments' reflection will, I hope, permit you to recognise that it is highly unlikely that the sum of all human knowledge is held in people's heads. It is not the case that all the knowledge humans have acquired over the years is contained in the heads of people now living.

I am not here rejecting the idea that any single person has all of human knowledge in their head. That is a trivial point. No one would argue that there is, anywhere on earth, a person who knows everything. I am saying that, collectively, all the people on earth do not have in their heads all of human knowledge. And nor am I thinking about all the knowledge that people who are now dead had in their heads. Much of that is now lost. My point is that we may talk of knowledge as something that exists quite independently of people.

Philosophers and others often refer to people as knowing subjects. That is people are subjects that have the characteristic of knowing things, of having knowledge[1]. The knowledge they have may therefore be called *subjective knowledge*. I am saying that, in addition to this subjective knowledge, there is other knowledge - knowledge that is not subjective.

[1] You may know that in grammar, the person or thing that is active – doing, being or having – is called the subject of a sentence. The person or thing that is being acted on is the object of the sentence. For example, I (subject) own a car (object).

You may be ahead of me by now. You may have already have been thinking about knowledge contained in books and in computer files. We may call this knowledge *objective knowledge* – knowledge that exists as an object independently of a knowing subject. I tend also to refer to it as public knowledge – knowledge that is in the public domain and accessible to people, rather than privately held in people's head. (The knowledge in your head is private and only available to me if you choose to share it.)

Quite a number of interesting lines of argument may be developed from this idea. For now, I wish to make a couple of points.

First, note that I am not here using the word *objective* in the sense in which it is sometimes used in everyday conversation. In everyday use people often mean by objective that some statement is reliable, or free of distortions and of the influence of personal opinion or preferences. Some objective knowledge of the kind I have described may have some of these characteristics, but it is not the case by definition – what I am calling objective knowledge is not defined as knowledge that is reliable and free of distortions.

The objective knowledge I have described comprises quite a variety of different kinds of things. It includes, for example, observed facts, such as the fact that there are some large stones arranged in a particular pattern near Amesbury in Wiltshire. (I am thinking of Stonehenge.) Some facts may be quite precise measurements, for example, the height of the stones at Stonehenge. Another class of things that is included in objective knowledge is theories. Thus, there are theories about why Stonehenge was constructed. Theories are different from observed facts. Theories are explanations; and explanations are arguments that contain reasons to believe an answer to a *why?* or a *how?* question.

Do not, for the moment, spend too long reflecting on what has just been said about theories, explanations and arguments. What is important is that we can see that objective knowledge contains both observed facts and theories and that these are different kinds of things.

Universities

One of the key buildings in any university is the library. Universities have always been important repositories of objective knowledge as well as places in which one might find knowledgeable people. Now, universities collaborate to share objective knowledge. Not only is there an inter-library loan system, but universities have cooperated to establish electronic access to objective knowledge. For example, there is something called the International Bibliography of the Social Sciences (IBSS) produced by the British Library of Political and Economic Science (the library of the London School of Economics, which is part of the University of London). IBSS is a database containing details of work in social

sciences published in over 2,000 journals. Thousands of academics at universities all over the UK are able to use this database.

Although I tend to refer to this great wealth of objective knowledge that humans have created as *public knowledge*, it is not all freely available to the general public. Broadly speaking, to gain access to IBSS you must be a *bona fide* member of the academic community. The good news is that for the duration of your university studies you are a member of this privileged community, with free access to far more public knowledge than other members of the public!

The academic staff who work in universities are not just knowledgeable, they are skilled in the use of this public knowledge. They use it as part of the process of producing new knowledge; they use it in providing guidance and advice to governments, companies, and others. And one of the things university students are expected to do is to engage with public knowledge in a broadly similar way. So students should not expect to come to university to fill their heads with knowledge – which would then be subjective knowledge; but rather they should come to develop skills in using and engaging with public knowledge – objective knowledge.

This may surprise you. You may not have thought about studying in this way before. You may not have thought about knowledge in this way before. Indeed, everyday discussion of knowledge and learning seems much more to be based on what might be called the *bucket theory of the mind*. This is the explanation of learning and knowledge that says we gain knowledge from experience (sometimes in formal study situations and sometimes elsewhere) and this knowledge is accumulated as if it were filling a bucket. While I do not deny that students acquire subjective knowledge while at university, I do not believe it is the most important aspect of university study and I think that the development of skills is often not well understood and articulated.

Of course, this idea that students come to university to develop skills in the use of public knowledge may not sound so surprising. There seems to have been an increasing amount of discussion about skills development in higher education in recent years. But there is a tendency to associate focus on skills with so-called vocational education. I hope these notes help to make clearer the notion of academic skills.

Implications for students

You might now begin to wonder whether you have acquired some of these academic skills already, during your previous education. The answer is yes, you have. Indeed, we may include the content of newspapers and TV and radio programmes as public knowledge, as well as text books you used at school. You are skilled at engaging with all this knowledge.

You read it, think about it, discuss it with other people, and perhaps write essays and projects using it. But there are levels of skill.

At lower levels, it is necessary only to be able to comprehend some public knowledge and use it to guide our behaviour. To give a very simple example, people need to be able to comprehend the knowledge that in the UK drivers of motor vehicles must keep to the left side of the road, and to be guided by this knowledge when driving. Similarly, it is useful to us to be able to recognise that certain changes in the appearance of the sky are often followed by rain. We can then avoid going out when it is about to rain, or at least take with us an umbrella.

In universities people are concerned with more than just observing patterns in the weather and teaching people that they must adhere to certain conventions, such as driving on the left. We are concerned to ask more searching questions such as: why does it rain after grey clouds appear in the sky? Crucial skills needed to deal with such questions are: imagination – creative thinking, needed to come up with ideas for possible answers/theories; and critical thinking, needed to judge the quality of our theories.

So there are some practical implications that should be taken from these remarks. You should think about your academic skills, not just about your knowledge. You should think, in particular, about your skills in searching for, comprehending, evaluating and using public knowledge.

You might also find it useful to consider the material you find yourself studying on your degree course in light of these remarks. From time to time, ask yourself: does this stuff I am studying comprise facts, or conventions, or theory? You will probably recognise that different approaches to study might be appropriate depending on the answer to this question.

Further reading

“Some further notes on academic practices and skills” – available from Chris Downs.

I have taken the concept of objective knowledge as discussed above from the work of Karl Popper. Popper also refers to objective knowledge as being the content of World 3. This contrasts with World 1, which contains physical objects such as human beings, elephants, trees, lakes, cars and theatres. World 2 is the world of mental states – our feelings of anger, knowing, uncertainty etc. Note that World 3 things, such as theories, are actually contained in World 1 objects, such as books.

Some further remarks on academic practices and skills

In my previous remarks I argued that we can think of two types of knowledge – subjective and objective. I also suggested that students should pay attention to their skills in engaging with objective knowledge (which I also called public knowledge) as well as thinking about increasing their subjective knowledge – the knowledge they have in their heads.

These skills include the following.

- The skills required to locate and obtain public knowledge relevant to some task we undertake or some other purpose we have.
- The skills required for managing the public knowledge we use repeatedly.
- The thinking skills involved in evaluating and making use of public knowledge.

These thinking skills may be described as *critical thinking*. There are many definitions of critical thinking. Here is one that I regard as useful to our purposes.

> "Critical thinking, then, is the careful, deliberate determination of whether we should accept, reject or suspend judgement about the truth of a claim or a recommendation to act…" Reichenbach (2001)

The claims to which Reichenbach refers could include claims such as:

- the tallest stone at Stonehenge is 4.5 metres tall;
- Stonehenge was built for the holding of rituals;
- you must drive on the left side of the road in Australia;
- unemployment is caused by lack of demand for goods and services.

Some of these are more straightforward to make a judgement about than others. The claim about the height of the tallest stone at Stonehenge might be accepted if we judge the source of the claim to be reliable and trustworthy. If we are unwilling to accept it on this basis then we can check the claim by looking for an alternative source of such factual information that is deemed to be reliable and authoritative. We would be unable to easily check the claim by making a measurement ourselves because public access to the stones is restricted. The claim about driving in Australia could be easily checked by our own observation – as long as we have the time and money to go there. Alternatively, we could again consult a trusted source.

If you encounter contradictory factual statements, such as a claim that the tallest stone at Stonehenge is 4.6 metres tall rather than 4.5 metres, then you can, in principle, establish which fact is correct and which is false by making your own observation. Alternatively, you

might communicate with the authors of these two claims and discover that one has made a typing error, or that both authors agree the tallest stone is actually 4.57 metres but one has rounded this down to 4.5 (not following normal conventions) and one has rounded it up (as is conventional).

The claims about the cause of unemployment and the reason why Stonehenge was constructed are different. We could say the claims about the height of a stone and driving in Australia are *empirical* matters. These are empirical facts, meaning that they constitute knowledge gained by observation, using our senses (in this case our sense of sight).

However, we are not able to directly observe reasons or causes. The claim that Stonehenge was constructed for accommodating rituals may be said to be a theoretical claim. It's a theory about (or explanation of) the reason why Stonehenge was built. Just as you might encounter competing factual claims, so you might come across competing theories. The claim that unemployment is caused by lack of demand is only one theory about the cause of unemployment – there are others and you could probably think of one yourself.

Write down briefly an alternative theory to explain what causes unemployment.

We could base our decision as to whether to accept, reject or suspend judgement about these theoretical claims on the source – who has advanced these theories? Is that person an authority or expert whom we should believe? But what if the expert has made a mistake? What if the authority has less expertise than we suppose? What if the authority wishes to mislead us?

The physicist Niels Bohr[1] said that "An expert is a man who has made all the mistakes which can be made in a very narrow field." This makes experts sound less impressive, by focussing on the errors they make. But it is actually a very high standard – who can say they have made <u>all</u> the mistakes possible, even in a very narrow field?

[1] Bohr was awarded the Nobel Prize for physics in 1922.

There are many situations in which to rely on our judgement of the source of a theory, argument or explanation, and to rely on someone else's expertise, would be the wrong thing to do. You need to apply some critical thinking skills to the theory itself.

You now (hopefully) have two theories to explain what causes unemployment. Which one is correct?

There is a very powerful argument that says we can never know if a theory is correct. We won't, however, pursue that now. Let me rephrase the question. Which theory is the better of the two? How should we carefully and deliberately determine which theory to accept and which to reject?

A key activity undertaken by academics is testing and evaluating theories. This is why you might sometimes have found yourself saying something like: "Well, that's all very well *in theory*, but…." with a slightly disdainful emphasis on the words *in theory*. The implication is that theory is rather useless and something that people in the so-called ivory towers of universities waste their time on. However, you might also have caught yourself saying something like: "Well, I have this theory that…." followed by some suggestion that there is some particular reason why the British are so poor at learning foreign languages, for example. So if you listen to everyday conversation you will realise that theorising is something we all do a lot of.

Moreover, people in business also engage in evaluating theory, even though they might not use the term. One manager in a business might argue that profits will be increased by raising the firm's marketing spend. Another might argue that the reverse is true. At the heart of these arguments are some reasons/causes. Theory, explanation and argument are all about providing reasons. We give reasons to try to persuade other people to accept our conclusions.

Explanations or arguments that might be accepted by people in non-academic settings, may not be so readily accepted in universities. Academics are after the best arguments, explanations

Digression on definitions

These different uses of the word *theory* illustrate why it is not always helpful to get bogged down in definitions. (Recall my opening sentence in my previous remarks on academic practices.) If we try to define the word *theory*, we will likely run into difficulties because people use the word a lot and mean different things by it. Trying to get people to stop doing this and to stick to one particular definition is always going to be an up-hill battle. So there may not be much to gain by trying to work out a definition that suits your present purposes. You might be better off adding a qualifier, such as *academic* or *everyday*. Then you can explain what you mean by an academic theory or an everyday theory and hope that your reader or listener will understand you more accurately.

and theories! Universities are places where people are engaged in the pursuit of truth. Very highly developed critical thinking skills are needed. Access to the latest and most rigorously examined and tested public knowledge is needed.

However, it might be argued that businesses would make better decisions if they adopted a more rigorous approach to their evaluation of arguments and explanations. In fact, we might propose a theory that one of the things that distinguish successful businesses from less successful ones is the quality of the critical thinking that goes on in them and which informs their decision-making. You should be under no illusion that critical thinking is simply an obsession of academics. It is a vitally important skill for your future success in the world of work; and improving your level of critical thinking skill should also help you to make better decisions in all aspects of your life.

Suggested further reading

You might like to read chapter 1 of Whyte (2003) on the issue of authority. It's a very short book that I really enjoyed reading. Chapter 1 is only 9 pages and contains an interesting section on opinion.

References

Reichenbach, B.R. (2001) *Introduction to Critical Thinking*. New York: McGraw Hill
Whyte, J. (2003) *Bad Thoughts: a guide to clear thinking*. London: Corvo