

Knowledge issues, knowers and knowing

"The time has come," the Walrus said,
"To talk of many things:
Of shoes—and ships—and sealing-wax—
Of cabbages—and kings"

Lewis Carroll

People know many things: they know when they are cold, or sick; they know if they are sad or happy, lonely or in love; they know how to make fire; they know that the sun will set and rise.

Nonetheless people rarely stop to think about the processes by which knowledge is produced, obtained or achieved, nor about why, under what circumstances, and in what ways knowledge is renewed or reshaped by different individuals and groups at different times or from different perspectives or approaches.

The questions in this guide are meant to provide opportunities to pause and reflect upon the complexity and richness of knowledge and the process of knowing, on the scope and limits of knowledge, as well as on the roles and responsibilities that knowledge may bring to us as individuals, groups or communities. As such, these questions focus on knowledge issues. The use of this term "knowledge issues" is an expressly wide one, the purpose of which is to allow students to undertake an exploration of a diversity of TOK questions that are relevant to them in their specific context. Precisely because of its breadth, however, it is important to provide guidance for teachers and students as to what is and, importantly, what is not a knowledge issue.

Knowledge issues

Knowledge issues are questions that directly refer to our understanding of the world, ourselves and others, in connection with the acquisition, search for, production, shaping and acceptance of knowledge. These issues are intended to open to inquiry and exploration not only problems but also strengths of knowledge. Students sometimes overlook the positive value of different kinds of knowledge, and the discriminatory power of methods used to search for knowledge, to question it, and to establish its validity. Knowledge issues can reveal how knowledge can be a benefit, a gift, a pleasure and a basis for further thought and action, just as they can uncover the possible uncertainties, biases in approach, or limitations relating to knowledge, ways of knowing, and the methods of verification and justification appropriate in different areas of knowledge.

Two examples:

- Consider the question, "What is the value of distinguishing between what we know and what we don't know?" In the context of problems of knowledge, the emphasis is likely to be on the good reasons we have for doubting whether the lines we draw between the two are as clear as we sometimes suppose them to be. In contrast, in the context of knowledge issues, the reasons we have to maintain the legitimacy and usefulness of the distinction are likely to come to the fore.
- Alternatively, consider the question, "Is there one way of knowing that is best for acquiring knowledge?" In the context of problems of knowledge, the emphasis is likely to be on why over-reliance on or confidence in each way of knowing would be unwise; in the context of knowledge issues, reasons for relying on or trusting ways of knowing should also be considered.

In the broadest understanding of the term, knowledge issues include everything that can be approached from a TOK point of view (that is, in accordance with the TOK aims and objectives as they are formulated) and that allows a development, discussion or exploration from this point of view. For example, a simple question that is often raised by students, "Are teachers' course handouts and textbooks always right?", can be treated as a knowledge issue when correctly framed in the context of TOK aims and objectives. On the contrary, it can be the prompt for entirely trivial answers that have little or nothing to do with TOK.

It is to be expected that a good treatment of many knowledge issues will necessarily deal with several aspects described above and that these can be interwoven in different, equally relevant ways. For this reason the treatment of knowledge issues can be distinguished from other issues that might arise in the context of a particular subject area. For example, a consideration of sense perception exclusively from the point of view of the psychology or biology of perception is not a TOK treatment of a knowledge issue.

Nature of knowing

- In English there is one word "know", while French and Spanish, for example, each has two (savoir/connaître and saber/conocer). In what ways do various languages classify the concepts associated with "to know"?
- In English, French, Spanish or Chinese, for example, what is the relationship between the different ways of expressing "know": "they know of it", "they know about it", "they really know it", "they know that person", "they know that this is so", "they know how to do it"? Are there other ways of using the verb "to know"?
- How do "believing that" and "believing in" differ? How does belief differ from knowledge?
- What are the differences between the following: information, data, belief, faith, opinion, knowledge and wisdom?

Knowledge communities

- In the TOK diagram, the centre is represented as both an individual and a group. To what extent can we distinguish between knowing as an individual and knowing as a group or community enterprise?
- How much of one's knowledge depends on interaction with other knowers?
- Are there types of knowledge that are specifically linked to particular communities of knowers?

- To what extent can we act individually in creating new knowledge? What are the strengths of working in a knowledge community? What are the dangers?
- Is common sense just what is taken for granted in a community? How can we decide when to question common sense?
- Presented with the belief system of a community of knowers, how can we decide what we personally believe? How can we decide which beliefs we ought to check further? In the end does it just amount to a question of trust? If so, how can we decide who to trust, and on which issues?
- Do we need to grow up in a human community in order to develop ways of knowing (sense perception, language, reason and emotion)? Or are we born “hard wired” to be able to use them? Is community more important in some ways of knowing than others?
- In what sense is a community of knowers like bees constructing the labyrinths of their hive or a group of builders constructing a building?

Knowers and sources of knowledge

- How is knowledge gained? What are the sources? To what extent might these vary according to age, education or cultural background?
- What role does personal experience play in the formation of knowledge claims?
- To what extent does personal or ideological bias influence our knowledge claims?
- Does knowledge come from inside or outside? Do we construct reality or do we recognize it?
- “Whoever acquires knowledge and does not practise it resembles him who ploughs his land and leaves it unsown.” (Sa’di) Are there responsibilities that necessarily come with knowing something or knowing how to do something? To whom might these responsibilities be owed?
- In what sense, if any, can a machine be said to know something? How can anyone believe that a machine can think?
- When a machine gives an instruction to press a certain button to make it work, where is that knowledge or awareness located? Does technology allow some knowledge to reside outside the human knower? Is knowledge even a “thing” that resides somewhere?

Justification of knowledge claims

- “If the frog tells you that the crocodile is dead, do not doubt it.” What might this Ghanaian proverb suggest about who it is that provides the justification for a knowledge claim? What is the difference between “I am certain” and “It is certain”? Is conviction sufficient for a knowledge claim to be validated? What are the implications of accepting passionate, personal belief as knowledge?
- How are knowledge claims justified? Are the following types of justification all equally reliable: intuition, sense perception, evidence, reasoning, memory, authority, group consensus, and divine revelation?
- Why should time be taken to assess critically the nature of knowledge claims?

Linking questions

- Do knowledge claims transcend different communities or cultures? What differences exist between *public and private justifications*? To what extent might this *distinction between private knowledge and public knowledge* be culturally dependent?
- Do the images of a web, building blocks, concentric circles, a spiral, or a grid make a convincing description of the interconnections in the ways of knowing and areas of knowledge? In what ways might these metaphors be useful?
- To what extent is knowledge about the past different in kind from other kinds of knowledge?
- Does making a knowledge claim carry any particular obligation or responsibility for the knower?

Focus Activity

Student Handout

- Read the example in passage A and determine whether “justified true belief = knowledge”.
- Read passage B. Study the definition of knowledge in the equation that starts with “S knows that P is true”.
- Look at the example in passage B and determine whether “justified true belief = knowledge”.
- Follow with class discussion to establish the implications of each example.
- Have each group redefine “knowledge”.

Passage A

He glances at a clock, sees that it says nine o'clock, and believes that it really is nine o'clock, which in fact it is. Such a person is justified in the belief because it is precisely with respect to glancing at clocks—or phoning to find out the time—that we do suppose ourselves in possession of the relevant evidence in such matters. How else would we be justified? If the clock were fine, there is little doubt that we might say the person knew that it was nine o'clock. It happens that the clock is not fine, however. It is broken, but, like every broken clock, it ‘tells the right time’, so far as outward appearance is concerned, twice a day. The deceived person glanced at the clock just when in fact the time really was nine o'clock. So his belief was true as a matter of accident.

It is easy to generate countless such examples. There is a story by Sartre in which a prisoner, meaning to deceive his interrogators as to the whereabouts of someone they are seeking, deliberately lies. It just happens that the person he is seeking to protect is where he says he is. The speaker intended to lie, but the world tripped him up, and what came from his mouth was true instead. His captors acted on his words, which they believed true and were justified in believing true. They were justified because a man in the prisoner’s situation put up his body and his life as collateral. They knew, and assumed he knew, that if caught in a lie he would die only after terrible torture. So they felt they could act on his words, which were true—but did they **know** where the sought-for partisan in fact was, even though they found him where they (rightly) believed they would? Few of us would say they did.

Connections to the World, AC Danto

Passage B

Various attempts have been made in recent years to state necessary and sufficient conditions for someone's knowing a given proposition. The attempts have often been such that they can be stated in a form similar to the following.

Proposition 1: S knows that P is true iff (i) P is true,
(ii) S believes that P is true, and
(iii) S is justified in believing that P is true.

It is argued that proposition 1 is false because the conditions (i), (ii) and (iii) do not constitute a **sufficient** condition for the truth of the proposition that S knows that P is true.

Suppose that Smith and Jones have applied for a certain job. And suppose that Smith has strong evidence for the following conjunctive proposition.

Proposition 2: Jones is the man who will get the job, and Jones has 10 coins in his pocket.

Smith's evidence for proposition 2 might be that the president of the company had assured him that Jones would in the end be selected, and that he, Smith, had counted the coins in Jones's pocket ten minutes ago. Proposition 2 entails proposition 3.

Proposition 3: The man who will get the job has 10 coins in his pocket.

Let us suppose that Smith sees the entailment from proposition 2 to proposition 3, and accepts proposition 3 on the grounds of proposition 2, for which he has strong evidence. In this case, Smith is clearly justified in believing that proposition 3 is true.

But imagine, further, that unknown to Smith, he himself, not Jones, will get the job. And, also unknown to Smith, he himself has 10 coins in his pocket. Proposition 3 is then true, though proposition 2, from which Smith inferred proposition 3, is false. In our example, then, all of the following are true:

- (i) proposition 3 is true,
- (ii) Smith believes that proposition 3 is true, and
- (iii) Smith is justified in believing that proposition 3 is true.

Conclusion: But it is equally clear that Smith does not **know** that proposition 3 is true; since proposition 3 is true because of the number of coins in Smith's pocket, while Smith does not know how many coins are in his own pocket, and bases his belief in proposition 3 on a count of the coins in Jones's pocket, whom he falsely believes to be the man who will get the job. So proposition 3 is true, but Smith does not know it.



Reading Resources

DIALOGUE ON ANIMAL LANGUAGE

The following dialogue by Richard van de Lagemaat explores the question of whether or not any animals can be said to possess language.

DOLLY: I have just been to the zoo, and I was wondering: do you think that animals have language?

GUY: Animals? Hmm ... Well, as it stands that is a badly formulated question.

DOLLY: What do you mean?

GUY: The word 'animal' covers a spectrum of living beings, ranging from amoebae and worms at one end to apes and human beings at the other. When you ask, 'Do animals have language?', I could answer that since we are animals, and since what we do is *by definition* language; then it is trivially true that animals have language. Nevertheless, I doubt that amoebae have a lot to say for themselves.

DOLLY: Well, apart from human beings, you would surely agree that most animals communicate with each other in one way or another – either through noises, or scents, or bodily movements. To take a well-known example, bees perform a 'dance' to convey information about the distance and direction of nectar sources to their fellow workers. And that surely is a rudimentary form of language.

GUY: I think we need to make a distinction here between language and communication. I would say that while bees certainly communicate with one another, they do not have language.

DOLLY: What is the difference?

GUY: Well, language is a *subset* of communication, and while all language is a form of communication, it is not the case that all forms of communication are language.

DOLLY: I would have said that the words 'language' and 'communication' are pretty much synonymous.

GUY: No! There are many forms of communication that no one would call language. For example, when you turn your car key in the ignition, the car starts, but no one would say the car *understands* that you want it to start. While information is certainly communicated, the communication in question is purely mechanical and has nothing to do with language.

DOLLY: As sometimes happens, our disagreement here seems to be about the meanings of words. My understanding of the word 'communication' is derived from the *Encyclopaedia Britannica* which defines it as 'the exchange of meanings between individuals through a common system of symbols.' You seem to be using it in a much broader sense to include purely mechanical communication.

GUY: Well, let's not get bogged down in semantics. My point is that bees respond to one another in an essentially mechanical way. In any case, since all they can 'talk' about is nectar, it would, to say the least, be misleading to describe their dance as a form of language.

DOLLY: But how do you know that nectar is all they can talk about?

GUY: Well, given that bees have only primitive brains, I think it's a safe bet that they don't spend much time discussing the meaning of life.

DOLLY: OK. To move the discussion forward, why don't we focus on higher animals, such as monkeys? Do you think that monkeys have language?

GUY: No! I believe that language is unique to human beings.

DOLLY: But given that we evolved from chimpanzees and share 99% of our genes with them, we should surely take seriously the idea that they might have abilities similar to our own?

GUY: The fact that we share 99% of our genes with chimpanzees doesn't tell us anything – the remaining 1% could make all the difference. Moreover, our brains account for a much bigger proportion of our body weight than do chimp brains, and a bigger relative brain size is a good indication of greater intelligence.

DOLLY: Well, let's take a look at some of the scientific evidence. Take the case of vervet monkeys. Scientists have discovered that their alarm calls vary according to the predator that threatens them. The leopard alarm call, eagle alarm call, and snake alarm call are all different from each other, and elicit different responses from members of the group. When the monkeys hear the leopard alarm call they climb into the trees, when they hear the eagle alarm call they hide in the undergrowth, and when they hear the snake alarm call they look around in the grass. This surely proves that they have words for 'leopard', 'eagle', and 'snake', and that they understand what these words mean.

GUY: It proves no such thing! What your example shows is that vervet monkeys can communicate with one another about matters that are important for their survival. Rather than attribute understanding to them, I think their behaviour is best explained in terms of stimulus and response. Just as Pavlov's dogs were conditioned to salivate whenever they heard a bell ring, so the monkeys are reacting automatically to various alarm calls. Understanding does not come into it – it is simply a matter of a particular call triggering a particular response.

DOLLY: OK, so what about the various experiments in which chimpanzees have been taught American sign language? One of the first stars of such experiments was a chimp called Washoe who successfully learnt more than a hundred words of sign language.

GUY: Well, from what I've read about this experiment, Washoe's main concern was with getting food and being tickled. Drilling a chimpanzee in a few bits of sign language doesn't seem so very different from training a hungry rat to press a lever that releases food.

DOLLY: You are not doing justice to the remarkable linguistic abilities shown by these chimps. For example, their ability to talk about absent objects shows that they are not simply reacting automaton-like to things in their immediate environment. Similarly, the fact that they sometimes tell lies in order to mislead their trainers suggests that rather than responding instinctively to various cues, they are using signs intentionally. Perhaps most impressive of all, they demonstrate genuine creativity by inventing new combinations of signs. To give a few examples, Washoe came up with the constructions 'open food eat' for a

refrigerator, 'hot metal blow' for a cigarette lighter, and 'listen drink' for Alka-Seltzer. Such creativity proves that far from responding mechanically, Washoe had a genuine understanding of the meanings of these signs.

GUY: I think you will find that more recent research has cast doubt on the validity of these experiments. According to some observers, Washoe's trainers became so emotionally involved with their subject that they lost the ability to be objective and were often simply *projecting* sign language onto Washoe's random hand movements. In the view of Steven Pinker of MIT, Washoe may actually have known as few as 20 signs. Compare that with human beings whose vocabularies consist of literally thousands of words.

DOLLY: Your talk about lack of objectivity shows that you don't really understand how social science works. You simply cannot study apes with the same dispassionate objectivity with which you can study rocks – at least, not if you want to teach them language. If you were trying to teach your child language, how far do you think you would get if you tried to do it objectively and without emotional involvement? Not very far, I'll bet! It's the same with apes. You can only teach them language if you have some kind of emotional rapport with them.

GUY: Perhaps you are right about that; but my point is that once you have made an emotional connection with an ape, you may be too keen to attribute skills to it that it does not really possess. Just as I think parents are not the best judges of their children's intelligence, so I doubt that someone who has spent years working with an ape can look at what is happening dispassionately.

DOLLY: You know, I'm beginning to think that you do not really have an open mind on this topic, that you have already decided that chimps do not have language, and that you are not willing to accept any evidence that goes against your belief.

GUY: Not at all! I am sceptical about the claims concerning primate language because I know that people have a tendency to project human qualities on to animals and that they find it difficult to be objective about them.

DOLLY: Well, let's take the more recent experiments conducted by Sue Savage-Rumbaugh on bonobo chimps. Rather than sign language, she taught her chimps to communicate using a keyboard with more than 200 symbols on it, each representing a particular word; and she has achieved results with her star pupil, Kanzi, at least as impressive as those of Washoe. Since replacing signs with a keyboard gets rid of any ambiguity about how we interpret what is going on, I don't think you can dismiss this evidence so easily.

GUY: But what exactly does it prove?

DOLLY: It proves that Kanzi has a grasp of semantics and understands the meanings of words. When his trainers say to him things like, 'Please go to the office and bring back the red ball', he does just that. What's that if it is not understanding?

GUY: Once again, I would say that it is the ability to respond to signals as the result of training.

DOLLY: Listen, they set up an experiment in which Kanzi was given 600 sentences *he had never heard before*, and he was able to respond correctly to them

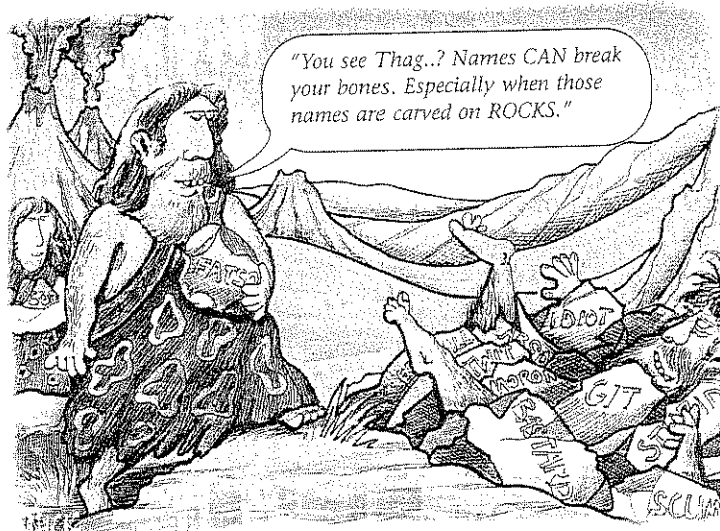


Figure 3.6

Language at war

The fact that language is not innocent and can be used to manipulate the way we see things is particularly apparent in times of war. Military training camps have long been aware that to get 'our boys' to kill their troops, *they* need to be dehumanised. During the Vietnam war, enemy soldiers were known as 'Gooks' by US servicemen. And in the first Gulf War (1991), an American pilot described firing on Iraqi soldiers as a 'turkey shoot'. Whatever your views about the rights and wrongs of these military campaigns, you would probably agree that it is psychologically easier to kill 'gooks' and 'turkeys' than human beings. Here are some more examples of 'warspeak', which is often used to cover up the reality on the ground.

Warspeak	Real meaning
security assistance	
neutralise	
no longer a factor	
take out	
inoperative combat personnel	
pacification	
service a target	
collateral damage	
friendly fire	
strategic redeployment	
liberate	
reporting guidelines	
pre-emptive	
ethnic cleansing	