5. Modern Epistemology

How can we be sure of anything? It is very easy to form beliefs, no so easy to really "know" that they are true. It is easy to say that you can have your opinion and I can have mine, no so easy to sustain such compromises. People generally have an instinct to know that makes compromises awkward, unsatisfying and unstable. In short, we rest uneasy without certainty.

In the course of western philosophy in the classical world, the cause of certainty was ultimately lost. The Philosophical schools filled student's minds with so many people making so many arguments they seemed to have lost the ability, and the will, to judge between them. Sextus Empiricus, writing in the 2nd century c.e., says that judgement is impossible without a criterion, and we have no criterion we can be sure of.

The human need for certainty is expressed in the decline of philosophy itself, and the rise of new religions. There were many fractious theological debates in the late Roman empire, but grand orthodoxies eventually evolved replacing debate and uncertainty with dogmas founded on faith. They asserted that truth was revealed by God in the words of his prophets, and was set down in scripture. For a thousand years, the leading edge of intellectual life had no doubt that scripture was the ultimate criterion of truth.

The sceptical black hole

Sextus Empiricus wrote in the language of ancient Greece, which few people could read. His words were translated into Latin in 1562, at a time of intense religious conflict across Europe. There was a lot of religious certainty about, but no consensus. It was commonly believed that the revelations of scripture held all the truth worth knowing, but which particular interpretation was another question. The violent anarchy didn't reflect well on the Creator himself. In short, certainty was breaking down with every riot, pogrom and battle.

The best example of the new scepticism can be found in the essays of Michel de Montaigne, written in the 1570s. Montaigne wrote slogans from Sextus Empiricus, such as "I suspend judgement" on the walls of his library. He adopted the emblem of a balanced scales, reflecting Sextus Empiricus's idea that for every good argument you can find an equally strong argument against it.

The value of scepticism was indisputable for Montaigne. Dogmatic faith set men to kill each other, besides standing in the way of honest enquiry. Montaigne avoided involvement in the religious conflicts of his day, in effect criticising all sides. He argued that certainty itself was the problem. Not only can we not know that any particular religious doctrine is true, we can't know anything is true. Scepticism rescues us from falsehood, and above all, conflict.

There was however, a problem that Montaigne was well aware of. Scepticism has a psychological price. The ancient Pyrrhonists thought that scepticism was good for the mind. They cited Socrates, who was untroubled in the face of his own death. The later sceptic and Christian convert, Augustine of Hippo, didn't buy this. For him the sceptical mind is restless and vulnerable, while scepticism undermines all ideas, even the moral foundations of society. It was a good thing, he believed, only because stripping people of all certainty forces them to look to God for answers.

It is possible to read a similar hope in Montaigne's essays. Perhaps he believed that the route of doubt and revelation taken by Augustine of Hippo could bring about a simpler, less dogmatic religious revival, something clearly preferable to the violent anarchy of his day. Yet Montaigne presents the problem, not the answer.

The late 16th century rebirth of scepticism in Europe, therefore, begins with an unvanquished bugbear. The epistemology of modern western philosophy restates scepticism and starts again where its classical form left off. While dogmatic faith may be false and dangerous, scepticism is unsatisfying and unsustainable. Certainty through reason seems to be the only way forward.

"I think, therefore I am"

Late 16th century Europe was a time of intense religious conviction. A dogmatic polarisation occurred that culminated in a long and terrible war. Over this same period, scepticism had been growing slowly in intellectual circles. Its arguments could be used by both sides of the religious divide to attack the other, and some thought that by attacking both you could promote tolerance. Others feared that doubt would go too far, undermining all beliefs.

Rene Descartes is sometimes described as the founder of modern philosophy. This is partly because he popularised a form of writing that broke the conventions of old-fashioned "scholastic" argument, and partly because he gave people a way out of the sceptical black hole. His "meditations" of 1641, aimed at sweeping away all doubts so that the new science could be built on solid foundations. It was an unrelenting search for certainty.

What can we be certain of: that the world is round? That Descartes existed? That the tree I can see through my window is really there? If there is any possibility that I might be wrong then I have not found certainty. Descartes even imagined that an evil demon might be tricking him. He asked is there anything the evil demon couldn't possibly fool me about?

In the end, he found only one thing he could be truly sure of. An evil demon could not fool him if he didn't exist. Even demonic deception requires a thinking thing that could be deceived. To put this another way, I can doubt everything except the fact that I doubt, and hence must exist to do so. The only true certainty became summarised in the Latin motto "Cogito ergo sum", "I think, therefore I am".

Having established this seed of certainty, what can I go on to deduce from it? Firstly, that my mind exists, which is an immaterial thing loaded with beliefs. Amongst these beliefs and intimate to my mind is the idea of a good God. Without this step we would be lost in our own absolute isolation, but with it I can give my beliefs credibility, enough at least to do science.

Descartes meditations were a descent into deep scepticism, followed by a sharp turn and ascent into certainty. This is how Descartes himself saw it, describing the turning point as an "Archimedean moment" (a decisive change of direction). A lot turns on it. If you don't hold to its argument Descartes hasn't saved you from the sceptical black hole, but hastened your fall.

Common sense

Descartes' solution to the problem of scepticism divided opinion. For those who don't believe that a good God is inseparable from thought, it was really no solution at all. The meditations' strong arguments simply steepened the sceptical helter-skelter. For those who shared Descartes' faith, it was a brilliant and inspirational solution. Champions like Malebranche, stressed its theological dimension and made it popular amongst the new crop of scientists.

A third opinion was offered by Berkeley, who argued that God or no God, there is no good reason to believe in the existence of material things. For Berkeley, we should not believe what we can't demonstrate, and scepticism shows that the existence of matter can't be demonstrated. Berkeley's "idealism" laid a marker that would have significant repercussions later in the story of

epistemology.

The fourth response to Descartes' meditations was to take issue with its method. Some argued that the whole sceptical fall and rise was simply unnecessary. We have in our nature, something that gives us knowledge of which we can be certain. This knowledge is called “common sense” (its meaning has changed slightly over time). A century or so after Descartes, Thomas Reid became the popular voice of this response.

Like many people, long before and long after Descartes, Reid believed that doubt could go too far. Scepticism makes us dispute the indisputable. It perverts our minds like an illness causing us to doubt (or at least claim to doubt) things that we as humans simply know, such as the fact that there are objects in space, or that one thing can cause another. We can pretend to doubt these things, but actually denying them is what we would commonly call madness. Reid said that there can be a kind of “metaphysical lunacy” that goes beyond healthy, genuine doubt.

Interestingly, Reid developed his popular ideas as part of a philosophical club in Aberdeen, Scotland, where they discussed the controversial, sceptical essays of the Edinburgh historian, David Hume. Today, opinion has more-or-less turned on its head, and it is Hume's ideas that are more popular than Reid's.

Hume argued that while it might be practical to ignore uncertainty, we can't deny it. Because there is no way of proving the existence of anything, we have to accept that reality is a construction of our minds. The external world is to us as a novel is to its author.

Hume is not an “idealist”. He does not deny the existence of the physical world, but acknowledges that it is a faith, that can't be supported with reason. Sense impressions from the material world provide the raw material from which our imaginations create the world we experience. All that Hume is saying is that we can never escape the limits of our minds, so can never be certain that these impressions are true reflections of anything.

The difference between these two arguments is subtle. The debate is best summed-up by a popular caricature of the time. It has Reid declare “We must believe in an external world” but whisper “but we have no reason for our beliefs”. At the same time Hume declares “We have no reason for our beliefs” and whispers “but we must believe in an external world”.

Still, Hume goes on to say something important and distinct, which is this: if scientific enquiry can show us how the mind itself works, then we may be able to understand how our imaginations create the world we experience. So while Descartes assumed that we must have certainty before we do science, Hume says that we can't have certainty, but we can take a reasonable gamble on science. In time science will verify itself by explaining the mind, allowing, perhaps certainty, or at least an indisputably strong foundation for knowledge.

A Copernican revolution

In 1781, just after Hume's lifetime, a book called *A critique of pure reason* was published. Some have described its impact as comparable to the effect of Copernicus' model of the solar system. Just as inverting the relationship of the earth and the sun (the former orbiting the latter, rather than the other way around) caused a revolution in astronomy, so inverting the relationship between thoughts and objects would do the same in philosophy. It did exactly what its author, Immanuel Kant, intended.

Seemingly taking up Hume's call, Kant offered a new way to think about the mind that made it neither the passive wax tablet of experience, nor the isolated writer of fiction. He suggested that our

minds contain “categories of understanding” that construct the world of experience from the raw material of sense impressions. Rather than the mind being a product of experience, experience is a product of the mind, at least in the sense that the world we know is and can only be the way it is, because of how our minds work.

The immediate problem that drove Kant was to do with how we get knowledge: Do we get it from reason, from experience or do we somehow just know things? Some knowledge certainly comes from reason, for example, because water is H_2O I know that it contains oxygen. I don't need to test this, it's part of the definition. Kant called this an “analytic” truth. Some knowledge however, is “synthetic”, such as the fact that water feels wet. This is something I need to test and I know it is true from experience.

The last possibility, that we somehow just know things, has a much older history in the western tradition. Ancient philosophers used the phrase “a priori” for anything that is known to be true before and independently of experience. It was typically used to describe mathematical or geometric axioms, like 1+1=2 or three joined straight lines form a triangle. It was also used for deductions, like H_2O contains oxygen.

Kant's innovation was to cut across the category of a priori truths using his analytic/synthetic distinction. The first part is uncontroversial. Kant says that the deduction that H_2O contains oxygen is both a priori and analytic. He goes on however, to argue that some knowledge can be a priori and synthetic. This is quite a strange idea that isn't easy to grasp.

To use Kant's example, I know that if I draw two points on a piece of paper there is only one possible straight line I can draw to connect them. I think you knew this in advance (a priori), but you might also be able to appreciate that you had to experience something to really know it (synthetic). Personally, I can't help mentally visualising it. I think this reflects the fact that the contradiction contains a truth. It feels like something I both know is true because I can see that it is, and something I know is true because it just obviously is.

If you find yourself a little distracted by this thought experiment focus instead on the more general concept it revealed to Kant. It convinced him that there are some things in our minds that are inseparable from experience. We didn't learn them from experience, they are inseparable because they shape experience itself. The joining of two points in space by a unique straight line is part of an idea our minds couldn't function without. It is fundamental to the world we experience and necessarily part of the idea of space we have necessarily constructed.

Think about how you understand the objects in space around you, how each is both a whole thing and made of parts, how it is made of different substances combined, how it continues to exist when you're not looking, how it can be the cause of something and the effect of another. These are some of the ideas we use to construct our world. Kant systematically described twelve categories of understanding. It wasn't quite the scientific understanding of the mind that Hume may have imagined, but it was satisfyingly complete and intuitively plausible.

So where does this leave the search for certainty? Kant was clear; we live in the world of experience, the “phenomenal” world. The categories are the common fabric of our minds, so we can explore this world with scientific consistency. The world as it is in itself, the “nuomenal” world however, is unknowable. One way to think of this is to imagine the categories as a pair of glasses. Without them the world is invisible. We can't even say that the glasses distort our impression of the world because comparison is impossible. All we can do is acknowledge the glasses and try to understand how they work.

Kant's philosophy therefore slips back into a kind of “idealism”, although there is a significant

development from the kind I mentioned earlier. Berkeley argued that sceptical arguments show that it makes no sense to believe in a material world. Kant's philosophy goes beyond the simple question of belief or disbelief. In one sense, we have to believe in the material world (it is implied in our categories of understanding), but in another sense, it makes no sense to say anything about the unknowable.

Phenomenology and Pragmatism

Kant left us with a contradiction. Others took it up and explored it further. Hegel for example, developed a powerful and influential idea from this inverted world. Our minds construct experience, he supposed, so whatever we experience must be the product of our minds. When we see a flying arrow hit its target we are not surprised because our minds have rules to perceive motion and change. Zeno's paradoxes for example, occur only because these rules sometimes conflict with the rules of formal logic. When this happens, Hegel observed, it is the rules of motion and change that prevail.

Hegel was amongst many who described their approach as "phenomenology". This means an acceptance that the nuomenal is unknowable and that everything we describe, from history to the stars, belongs to the phenomenal. Their point was to neither affirm nor deny the existence of material reality but to declare it unknowable.

At the beginning of the 20th century, Edmund Husserl proposed an explicit project for "phenomenology". He argued that the unavoidable belief in the material world, what he called the "natural attitude", had to be set aside (or bracketed-out) by philosophers. The task is to describe how things really are in the world of experience we actually live in. Crucial for the project was the idea that humans are "intentional" animals, that is to say, we invest the world and all that's in it with meaning. Knowledge is not just the material facts described by science, but also the meanings described by phenomenology.

At the same time, another trend in Western philosophy tried to change how we think about the truth. William James, who was a pioneer of the new science of Psychology, exemplifies an approach that became known as "Pragmatism". The key idea was that human truths are inseparable from human purposes. Given that philosophy has discovered that reality is unknowable, it should stop pretending that ideas can be measured by their correspondence to it. What we call "true" is whatever is useful.

It is significant that these ideas emerged around the same time as Psychology, and in the wake of the revolution in science brought about by Darwin's theory of evolution. James and others felt that humans weren't above nature, but were part of it. They were interested in how our thoughts, including our sense of truth, are shaped by our needs and our environment. The Psychologist did, to some extent, take on Hume's project, and Pragmatism is an epistemological reflection of this.

Amongst themselves, the Pragmatists disagreed on where their approach would take human thought. Would rational minds committed to what is useful converge on consistent ideas and call them "true"? Or are different ideas useful in different times and places, so our "truths" will always vary?

Most Pragmatists seem to have been drawn to the latter. They ended up with what is called "relativism". Its influence has echoed down the generations to the present day. It says, in short, that what is true to some people in some circumstances may not be true to other people in other circumstances. Our practical purposes shape our beliefs and whatever is useful for whatever we happen to want is what we call the truth. There are, as it were, "multiple truths".

Analytics

Some philosophers despised Pragmatism. Amongst them was the famous 20th century philosopher, Bertrand Russell. To equate truth and usefulness is to miss the obvious point that some truths are not useful and some things that would be useful if true are not. Something has gone wrong somewhere on the train of thought that lead to the Pragmatist conclusion.

Reaching back to common sense (as if Kant's Copernican revolution hadn't happened), Russell believed that we can start from the powerful intuition that the physical world exists. It supplies us with the evidence of our senses from which we may formulate theories and laws. Logic is the greatest discovery of humanity. It is a way of describing the world that matches how it actually works.

For "analytic" philosophers, the job of philosophy is not to undermine everything with scepticism, nor is it to construct speculative theories about how things work. They particularly disliked the grand systems thinking of Hegel. Instead, philosophy should contribute to the improvement of our knowledge of the world by the logical analysis and clarification of arguments. This was a time of great scientific progress. It was felt that philosophy had to find a complimentary role.

The idea was taken to its ultimately conclusion by a trend known as "logical positivism", which was popular in the early part of the 20th century. The job of philosophy, it argued, was to identify logical statements. Non-logical statements can have other purposes, emotional for example, but it is important not to confuse them with claims about the world. The task was to develop the rules of logic and reject as false anything that contradicted them.

One analytic philosopher, Edmund Gettier, in a well-known essay of 1963, analysed Plato's definition of knowledge as "Justified true belief". He did several thought experiments. One goes like this: Imagine two job interviewees, Smith and Jones. Smith believes that Jones will get the job and happens to notice that Jones has 10 coins in his pocket. He forms the justified belief that the man who gets the job will have 10 coins in his pocket. In fact, Smith gets the job, and then discovers that he too has 10 coins in his pocket. His justified belief turned out to be true, but we would agree that Smith did not "know" this.

Logic therefore, breaks down Plato's definition and puts the search for the essence of knowledge to rest. All we have left is the common sense intuition that we know what it means to know something. Analytic philosophy seems to set us back to Hume's doubt, before Kant's "Copernican revolution".

The linguistic turn

Another analytic philosopher however, Ludwig Wittgenstein, began with an interest in how and why the world is logical. He thought of logic as a way of describing reality that makes it intelligible. The other, more general way that we describe reality is with language, and humans only begin to think when their minds are full of language. From this reasoning he discovered that the limits of our language are the limits of our world.

Just as analytic philosophy describes logic, we must describe language. Just as it analyses scientific descriptions of the world, it must analyse those of natural language. In fact, a lot of philosophical error has been caused by the search for explanations, particularly the grand explanations, like Hegel's. If we concentrate instead on describing how language works, Wittgenstein believed, we will expand the sphere of the intelligible.

Language is also by the way, a joint enterprise, so Descartes' descent into his sceptical isolation (expressed in "I think, therefore, I am") is a trick of philosophical mystification. The thought and the thinker can only exist in a world of language-using others.

While thinking about language, Wittgenstein made an important discovery. At least since the days of Socrates, philosophers have analysed words in search of their essences: what exactly makes a horse a horse, or justice, justice? In fact, language does not work this way. People label things according to how they remind them of other things, so words come to describe family resemblances, not essences. That is why it is far easier to correctly use a word than to define it.

Applying this to the meaning of the word "knowledge" produces an interesting thought. When using natural language, people generally know the meaning of "knowledge" and are able to use it correctly. If we can set aside definitions and old philosophical notions of essences, and instead see the family resemblance in all the things we call knowledge, we can get a better understanding of what it really is.

When we do this, we see that it is used to emphasise certainty. We can say that it refers to Russell's common sense intuition. I might say that I only "believe" it will rain tomorrow, but I "know" the sun will rise. We are left nevertheless, with Hume's doubt. Analytics, whether logical or linguistic, does not rescue us from the sceptical black hole that Montaigne looked into in fear.

Post-modernism

We live at a time when scepticism is widespread. Contemporary intellectuals tend to shy away from talking about "truth". Perhaps this is an effect of large educational institutions where reputations matter and being wrong can end a career. On the healthy side, thanks to so many lessons of the past, people are keen to be inclusive and reject dogmatism.

The late 20th and early 21st century can also be seen as an age of relative social peace. Philosophies that offer certainties and grand explanations remain associated with the ideologies of the past. We should not forget that we live in the aftermath of the early 20th century, a time of social meltdown, atrocity and war. Amidst diminishing echoes of these ideologies we have become increasingly politically moderate, and when it comes to political theory, non-committal.

Meanwhile science has become the undisputed champion of knowledge. A big part of its success is its method, which has evolved to constrain the imagination of individuals, directing their energy to the gradual accumulation of evidence-based "findings". There is a kind of creative contradiction between its confidence and its humility, as captured by Richard Feynman's description of science as "a satisfactory philosophy of ignorance".

The general result of all these social factors is a philosophical bias in favour of scepticism, that is to say, a reticence or vagueness about asserting the truth. Combined with the convincing arguments of Phenomenology (that the world we inhabit is mediated by our senses), a lot of contemporary attention has turned to our "constructed" world of experience. The prevailing paradigm defines the philosophies of certainty and grand explanations as "modern" and hence its own sceptical relativism as "Post-modernism".

It seems that epistemology is over, and we have declared its long search for certainty, a failure. In recent decades it has become common-place to hear people talk of "multiple-truths", and now we have its inevitable, disconcerting offspring, "post-truth".

Conclusion

We have been aware of the limits of reason since ancient times. Zeno gave us the paradoxes and Sophists, like Protagoras, convinced people that you can find convincing arguments for anything. Western philosophy was born of the urge, exemplified by Socrates, to interrogate ideas to find

truths. The method was to search for essences, and its failure lead to Classical scepticism, which was really a reversion to the relativism of the Sophists.

Modern western philosophy was born of the urge, exemplified by Descartes, to find certainty through reason. It turned to the content of the mind, via Hume, Kant, Phenomenology and Pragmatism. Now scientific Psychology furnishes us daily with revelations of our unconscious biases. Certainty feels more elusive than ever in “Post-modern” times. We have yet again reverted to the relativism of the Sophists.

The analytic alternative rests on the faith of “common sense”, yet bore the interesting fruit of Wittgenstein's linguistics. This can be seen as another way to understand experience, albeit the common construction of a language community. It's spin off was the extensive analysis of signs and symbols that are another feature of “Post-modernism”. Likewise, it leaves the question of certainty untouched. Descartes' mission seems to have ended much as Socrates' did, stirring into a sceptical black hole.

For me however, it is too early to declare the epistemological project a failure. It is one thing for sceptics to show that we can't be certain of things, and another to explain why we nevertheless are. We find certainty, despite the sceptics best efforts, through our faith in common sense, or failing that, some other faith. This points to a human need it would be foolish to ignore or think we can wish away. While the need does not necessity the possibility, we must never declare certainty impossible. This would be to deny knowledge and reject philosophy itself.

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References

Collinson, Diane (1987) Fifty major philosophers: a reference guide
Descartes, Rene (1641) Meditations on first philosophy
Grayling, Anthony. Ed (1995) Philosophy: a guide through the subject
Kant, Immanuel (1781) A critique of pure reason
Stanford Encyclopedia of Philosophy (on line resource)
Stich, Stephen (1990) The fragmentation of reason