

Interview of Professor Christopher Peacocke

May 15, 2019 / by Zhao Tianyi & Chen Yan

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DOI: 10.47297/wspciWSP2515-469907.20200401

Honored to have you here. Heard it's your first time in China - how has China been so far?

It's like travelling to another world, actually. I wasn't prepared for all the beauty of the streets in Beijing around Renmin University. All these flowers, for instance, were very striking for me. There's no American city that has as many flowers in the centre of the main road. Also, I was very impressed by the vitality and the energy of the place. I find the energy very attractive.

Did you enjoy the conferences and lectures? Any special impression?

Yes, the conference was terrific. There was very high-quality discussion, it was like the discussion in the States or Britain. People were up to date with the literature, the questions were on target, and there were proper objections that needed answering. That was a real discussion. Of course, it was hard work for me, but it was good.

You're known as a child of Oxford - what was your family like?

Yes, I did say that. My father was a biochemist. He was exempted from military service during World War II since scientists were thought to be important to the war effort. He went

to Exeter College, Oxford. He started working on DNA when there was lots of work during the period in which Crick and Watson discovered the structure of DNA, and he worked on that for a long time. And then much later, I think about 1971, he turned to theology – I could not take that part of his career seriously.

Was there any sign you'd become a philosopher when you were a child?

I don't know about childhood, but like many people, in my teenage years I started thinking about free will, and read Dostoevsky, and *War and Peace*, works in which there are passages of philosophy. There was a lot of existentialism in the literature I read in high school. We read Sartre, we read *Huis Clos*, *La Nausée*. When you get interested in philosophy, you feel grasped by all the questions.

You were a PPE student - How was that experience? How did you end up majoring in philosophy?

Well, some aspects of the undergraduate experience at Oxford were extremely good. I had some undergraduate college friends who were very, very smart people. In the first year I shared a sitting room and study with someone who is now a professor of mathematics at Princeton, and has won a long list of mathematics prizes. I used to talk with him about the philosophy I was doing and he had interesting things to say about all the problems I found so hard. [laugh.] But I had good philosophical discussions over coffee after dinner with many other people.

Originally when I was 16 or 17, I was more interested in politics, but I just got hooked on philosophy my first weekend at Oxford after studying the logic text (at that time it was E. J. Lemmon, *Beginning Logic*) and after reading some Hume. And that was it – I thought, this subject is for me. After doing Preliminary Examinations in the first year, you were allowed to drop one of the three subjects and take more papers on other subjects, so I did drop the politics.

I also enjoyed the economics a lot. I was interested in the more abstract parts. I took the specialist economic theory paper in my Final Examination. My economics tutor said I should go into economics and I could see the attractions of the subject, but once you get hooked on meaning, truth, reference, intentional content, how can you do economics? But I did enjoy the theory very much. Even when I was a graduate student in philosophy, I still used to attend some of the lectures on

social decision theory and social welfare theory.

It was a stroke of incredibly good fortune that I arrived at Oxford at a time when many people would say Oxford was at its peak philosophically. The younger philosophers were terrific. There was Gareth Evans, who was four years older than me, and John McDowell who was about eight years older. When I was an undergraduate, I went to their joint classes. Michael Dummett and Peter Strawson were visible presences too. You just became used to having a lot of very good philosophy around.

But also, the whole experience of the philosophical environment was telling in a certain way. Because although these people obviously were extremely good at philosophy, I also thought I could do it too – the culture provided a demonstration that such activity was not completely inaccessible even to a beginner. I could see so how it's done and how to think: the right way to think of examples, right way to think of alternative theories... there's nothing like seeing other people doing it, and having that be part of your daily life. Oxford is a small city, and the university area is even smaller. We all had these rooms in colleges just a few minutes' walk away from one another. It is absolutely invaluable to have this kind of small circles where people exchange ideas. You get contradicted many times a day, and go away and think about what people said, then you go back the next day. Nothing else is a substitute for that.

I didn't realize until I moved away from Oxford what a luxury that was. And in many, many ways, it was not until I was in New York that I experienced again the same enormous concentration of philosophical thinkers. I think it was a golden era for Oxford for a long time, probably about 1955 to about 1985, when the philosophy there was so stimulating. And it wasn't really planned or by design. It's partly because in Oxford you can combine philosophy with actually almost every other subject that they had to hire so many philosophers. There was PPE, philosophy and history, philosophy and classics, mathematics and philosophy, physics and philosophy. And if you have to hire so many, at least some of them will turn out to be important thinkers.

You worked with many Oxford philosophers at the time. If you have to

pick one from whom you learned the most, who would it be?

I don't think there's a single person from whom I learned the most. There were two philosophers, though, with whom it was at that time fantastic to have a conversation. One was Gareth Evans, extremely smart, very fast. When I returned in 1972 from Harvard where I was a Kennedy scholar, I came back to a Senior Scholarship at Merton. And there appeared in my mailbox this little note, saying "Phone Mr. Evans, Univ extn 208". Evans said, "Come to our discussion groups. Let's discuss this. Let's discuss that." And he treated me as if I was one of the grown-ups. Whenever he gave a seminar and we had a break in the middle, he would say "Come up to my room, let's talk philosophy." If you were writing something that he thought was going in the wrong direction, he would simply say so, straightforwardly. When you presented a paper that he thought was going the right direction, he was incredibly encouraging, he would say "Yes, this is really interesting". Conversations with him always took you to new places, and of course I missed him very much after his early death. Our last long discussion was in May 1980, about the first person and immunity to error through misidentification - I remember every sentence of the exchanges.

The other person with whom philosophical conversations were quite special was Michael Dummett. It was of course very different talking with him, he was 25 years older. I went to him for my BPhil supervision on the Frege paper. In our first meeting we were to decide what topic to do next week, what time of the week to meet, etc. He said to me, "I've read the literature and I assume you've read the literature. So don't repeat what's in the literature, just do new stuff. We will meet every week. Don't think you'll have to write very much. I think 40 single space pages is quite enough for one week." I was just a 22-year-old first year BPhil student! It was an incredible education. In discussion, he was always deep, and utterly unstinting with his time, although I didn't agree with many of his views.

You spent many years in Oxford and London, but later moved to New York. What was it like to move to the US? Any difference between American and European philosophy departments?

There are some aspects of the American system that I like very much. One of

the reasons we moved to the US was to have the breadth of American undergraduate education available to our children. British undergraduate education, for all its strengths, is overspecialized. It would be better if you were to study a wide range of subjects at the university level and then gradually narrow down, and doing that indeed actually worked out very well for my children. They went to Columbia and Harvard where they both had undergraduate educations that I envied!

Another problem in Oxbridge and London, for all their other virtues, is teaching to a centralized syllabus that focused on the exams. There's a certain amount of inertia: the exam topics and areas that came up were always, at least in philosophy, slightly behind the literature. But when you teach a course in the States, you teach with these general titles, e.g. "Philosophy of Mind" or "Metaphysics". Of course you have to cover the ground, but you can put the latest ideas and issues in the course. You can integrate it with your own research, no one can complain that it's outside some centrally determined and likely out-of-date syllabus or examination tradition. It's more creative and more demanding.

How do you balance your personal and professional life? What's your daily work routine?

You had better ask my wife, and she would say, "I have to say just extremely badly! Next question." [laughs.] My family keeps saying so. I do philosophy because I like it, so it doesn't seem like work. I mean maybe grading papers is work, committee work is work, refereeing for papers is work, but doing philosophy is not. I'm actually rather self-indulgent. I indulge myself in doing philosophy. If I wasn't enjoying philosophy, I'd have been indulging myself in something else.

I'm a creature of habit – I tend not to work after dinner for instance, I'm a morning person.

We learned that your daughter is also a philosopher – how is her route to philosophy different from yours?

Yes, Antonia was an undergraduate at Harvard, and she had a fine education there. The philosophy faculty there are conscientious in advising undergraduate students. She had terrific advice from Alison Simmons on her dissertation. She took a very wide range of subjects because she was taught in a course system that allows

you go in much greater depth into the topic over fourteen-weeks semesters than the eight-week, one-hour-a-week undergraduate tutorials that I took in Oxford. Antonia started with the intention of concentrating in Physics, but also became intrigued by Philosophy – Richard Moran’s course was particularly important to her too. She is now an Assistant Professor at Stanford.

How has the profession changed over the years, in terms of the topics discussed?

It’s become much more professionalized in ways that are probably not always good. Because the job market has been so difficult, in the last four or five years many graduate students have felt they had to be extremely narrow, and as a result don’t have the broad perspective on the discipline which you really need. You never know what subject you’re going to get interested in. You never know what other areas may be connected with yours. You will miss things if you don’t have a broad perspective.

I hope that will gradually become obvious. I wish in certain respects the sort of typical agenda of philosophy in a graduate program were slightly broader. I wish there were better interdisciplinary connections with psychology, and with other parts of the humanities. I myself, as you know, work on the philosophy of music, and would like there to be many more connections with the arts and aesthetics. I think there is a huge amounts of good work still to be done in aesthetics.

Sounds like you’re quite fond of interdisciplinary approaches to philosophy?

Yes. I’ve heard people sometimes talk about something they call “pure philosophy”. I say there never was any “pure philosophy”. If you ask, “Who are the pure philosophers?” Aristotle certainly wasn’t a pure philosopher, Hume certainly wasn’t, Kant wasn’t, Frege wasn’t ... then who are they? It’s not healthy, I think, to think of there being some core philosophy that’s pure.

What I do think is there are certain issues that are distinctively philosophical questions, questions which are manifestly not scientific questions, not mathematical questions nor logical questions. For example, what is it for a perception to have a temporal content? Of course, you take it for granted: perceptions do have tempo-

ral content when you're doing psychology or other subjects. But the constitutive question, the "What is it?" question, needs a distinctively philosophical answer. I think almost anything interesting and serious in science is going to generate its own constitutive, philosophical questions. Descartes was a serious mathematician, so was Leibniz.... that is not an accident.

But still, the nature of the questions one should be asking and the subject matter one should be addressing when raising essentially philosophical questions should be utterly inseparable from issues generated by the current sciences, the current arts and the current best work in the humanities. So my view is that while there are distinctively philosophical questions and distinctively philosophical answers, the domain in which these questions arise has to be cross-disciplinary. As it always has been for the great philosophers we study.

How about some changes in the profession in terms of geography?

One of the things I spent huge amounts of time on in the last ten years before I moved to the US was the European Society of Philosophy and Psychology. Initially we ran it as a small group, then as "the gang of six", and then it expanded. This society that we ran had three properties: it was cross-disciplinary, trans-national, and it was unfunded. Every year we managed to find some university that would provide some subsidies, accommodation and lecture rooms for us to have a conference, and we did. One of the things we didn't predict at the time is that, not only did it bring cross-disciplinary people together, but in a given discipline like philosophy, we came to know colleagues from Barcelona, from Lisbon, from all over Europe.

I don't really like the talk of an analytical/continental divide in philosophy. I think analytical and continental philosophy are largely discussing the same questions just in somewhat different ways. But if we use that terminology, there has clearly been a large increase in philosophers, let's say, writing in a more analytical style. For example, Paris now is a great center of serious philosophy, and has been so now for several decades. When you speak at the École Normale Supérieure these days, it's like speaking in Stanford, Oxford, NYU or MIT. The Institut Jean Nicod, especially, has been committed to hiring good people. All over Europe,

there's serious philosophy of this sort, and that's an interesting change in the picture from forty years ago. The huge damage to UK universities caused by Brexit means that continental Europe will pull ahead further and faster.

What do you think of the future of the discipline then?

I mentioned earlier the connections between other disciplines and philosophy, and how important it is to address the conceptual issues arising from other disciplines. I welcome that, as long as it's done in a way that's respectful of the distinction between philosophical and nonphilosophical issues.

My general view is that it's a fool's errand to predict the direction in which philosophy is moving. For example, suppose you had asked me six years ago, would I think that there would be many conferences on panpsychism? I would have said probably not; but I would have been wrong. So you never know. Philosophy moves forward on average over longer periods, but it does not move in a straight line.

In general, though, I'm extremely encouraged by the quality of people coming into philosophy, people coming into the profession. And they know there's a tough job market, so these are people who are really interested in doing the subject. I'm not somebody who's gloomy about the future of philosophy.

More and more Chinese students going abroad to study philosophy. Any advice?

It's very difficult to get into a PhD program in the top fifteen universities in the US. Even though the job market is reduced, the numbers applying for all the major places are increasing. So it is quite hard, even if you've been to an excellent place as an undergraduate and had a very good philosophical education.

It's also difficult to compete with people who have done Masters-level degrees, e.g. the BPhil at Oxford. So my advice would be: if you can do an MA first before applying to a PhD program, that will put you at an advantage. There are certain universities that specialize in terminal MA programs in the States and Canada. And when you've got the faculty working primarily with MA students because they haven't got PhD students, they have more time to respond to and discuss with MA students, and you will get more feedback. But I know, it's expensive.

Let's turn to your philosophy. Favorite philosopher? Favorite books in philosophy?

I don't have a favorite philosopher. For certain philosophers, when you read the writings, you feel the presence of a great philosophical mind.

Aristotle is like that – you really see his fantastic intelligence in some passages counted as his greatest. Kant is like that, and so is Leibniz, at least when he's not talking about monadology but talking about reason and justification and his more rationalist ideas. Frege's greatest writings can have that effect on you too. And also Wittgenstein's writings, especially the very early Wittgenstein, for example in some parts of the Notebooks on which the *Tractatus* is based. You see this raw philosophical ability in the young man.

But there are many, many philosophers I admire, in one aspect or another. For the same reason I do not have a favorite book in philosophy.

Your theory of non-conceptual content is widely discussed in China. The paper you presented at Renmin seems to provide a revised view. Briefly introduce to our reader? Why did you change your mind?

There needs to be some care when formulating the respect in which I've changed my mind.

I came to think that all the cases in which previously I had thought you needed to say that a certain kind of content was non-conceptual – cases in which it played a very distinctive role in psychological explanation – are cases in which the non-conceptual content I was thinking about essentially involved analog representation of a magnitude, representation of a magnitude by a magnitude, as I said. So representation of direction or distance or other scenario content of perception can be represented by some kind of magnitude in the mind/brain. And I came to think that the various distinctive operations that can take place on mental states with scenario contents are really essentially operations on magnitudes, operations on magnitudes at the level of intentional contents. One magnitude representation is transformed into another. On the underlying level of the representing states, what you have is transformation of one magnitude into another according to special science laws.

So the respect to which my views was revised is not that there isn't some distinctive natural kind picked up by what I used to call non-conceptual content. Once you recognize that what I've just said is distinctive of what I used to call non-conceptual content, what you really got here is just one kind of content, always of the same kind. But there are subdivisions within that content. Some of the more primitive contents are available to creatures that don't have a language. They don't operate in the space of reasons as Sellars would say. Certainly, for those parts, the content of our perceptual states we share with the non-human animals. So it's not that I now say, "Oh, no, actually John McDowell is right about everything on conceptual contents". Unlike John, I would say that there's a uniform notion of perceptual content both for non-human animals and for humans. But there is one respect in which I am now in agreement with John: that there's a uniform notion of content. I plan to write up all this material very soon.

Does the distinction between two kinds of operation (conceptual/non-conceptual) on mental contents imply something about the nature of the content itself? For example, animals that can't perform conceptual operation, and consequently they can't have conceptual contents.

No, I don't think that follows. Take perceptual classifications of ranges of shades. You would expect animals that have color perceptions not just to perceive certain range of shades; those would be grouped into the oranges, the blues, and so forth. The fact that the creature represents something as orange can explain its actions. Maybe the orange things are the good things to eat, or the right fruits to eat, and so forth. That can happen even if they don't operate on that content in a conceptual way, in a way that involves exploiting a predicational structure. I think it will still be the same concept of orange that features in conceptual content. It can be operated by exploiting predicational structures, by identity inferences, universal qualification, existential instantiation and so forth. So I do think that one and the same concept can feature both in the mental states of the non-linguistic, nonhuman creatures and in our perceptual states. It must be that we could see color in exactly the same way that an animal sees the color. Maybe we can perform more operations, but it's still the same color notion.

So I used to distinguish between non-conceptualized and conceptualized versions of the same content, and I wouldn't do that anymore. I think for the purpose which I was previously using that distinction, I would now distinguish between certain operations. It is one of many, many cases in which I should have thought of something years ago. There's no reason I shouldn't have thought of this twenty years ago – that's my intellectual limitation. [laugh.]

Your discussion of magnitudes has been very notable in the lectures. That seems like a thought you didn't develop until recent years? How did it draw your attention?

Yes, I should have developed it much earlier. If you look at what I did, for example my work on analog contents in 1986, if I had thought about the correspondingly required ontology of magnitudes at that time, I could have done a much better job for sure.

I moved more into thinking about these issues when I was reflecting on the Suppes axioms that you get in some of his papers in the 1950s, especially the axioms for being an extensive magnitude. Of course, in these papers, all the theorems were properly proven, it is all elegantly done, but there's also some surprising and strange features of the theorems. These representation theorems work only, for example, if there's infinitely many objects! I thought of something which I did eventually have a chance to put to Pat Suppes before he died, that his actual axioms for being an extensive magnitude shouldn't be regarded as contributions about the representation of magnitudes. They should really be regarded as contributions to the metaphysics of magnitudes. I realized this a long time back because it comes up in Hartry Field's work and various attempts to explain what's going on when we use the real numbers in scientific laws.

I never believed the offered analyses of a statement about the magnitude of a particular object, the mass of a particular object, in terms of a complex network of relations to some standard object [e.g. the standard meter] in a basement in Paris. It seems to be comically incorrect, so you need to do better. You have to think about what ontology you need to do better. And then I got drawn into it further and further. So I started thinking about the ontology of magnitudes, the perception of mag-

nitudes ... it also became very clear to me in the early stages of this work that you need to develop a little algebra of magnitudes. You need to talk about ratios of magnitudes, and about multiplying them. If you're going to give an account of what was going on in Newton's second law, he did it all in terms of magnitudes.

I started developing the relevant algebra in a kind of cottage industry way. And then one day when I was in London having lunch with my friend Ian Rumfitt, I said, "You know, I'm attempting to do this. Do you know any literature on this?" He said, "What? Haven't you read Dana Scott's unpublished manuscripts called 'A General Theory of Magnitudes'?" Apparently, this document was circulating in the Maths Institute in Oxford when Dana was working there. It helped me enormously. Dana was interested in saying how you're doing Euclidean geometry explicitly with an ontology of magnitudes without assuming that the lines and angles are already assigned numbers, and he did it – of course – with style. I wanted to generalize his position into something metaphysically significant. One reason this was such a pleasure to me was that Dana Scott was my BPhil supervisor in my first year.

Quote from lecture: "Analog representation is the representation of magnitudes by magnitudes." That's a very catchy slogan – Could you please elaborate?

Yes. It occurred to me during a conference when I was asked to summarize my views. So there's a real distinction between representing something by a magnitude and representing it in some way linguistically or using symbols. In the better understood case of the rat brain, there is sometimes an offset of a certain kind of EEG rhythm in the place cell from some fundamental reference rhythm. How far it's offset can represent how far into a cell, some physical place, the rat has moved. This is very different from having a sentence in the language of thought in your brain. The computational powers involved are very different.

So it is the offset magnitude that's doing the representing. But what's represented? What's represented itself is a magnitude in the world. In the rat case, it's representing how far it's into a certain cell. There's equally representation by magnitudes of the magnitudes of size, distance, direction, etc.

A representation of a magnitude is always of the magnitude under a mode of presentation. The kinds of computation that occur, on a mental state with analog content, will be magnitude computations. They are operations on magnitudes, rather than anything like derivation in the predicate calculus or anything that exploits a predictive structure.

Your discussion of magnitudes is also part of the grand project of putting metaphysics first, could you briefly introduce it to our audience?

This is something that occurred to me back in 2008, when I was first giving my summer seminars at the University College London. I became very interested in the question of the relation between the metaphysics of a domain on the one hand, and the theory of intentional content or meaning of that domain in the other hand. There are various ways of getting into this issue. One way started with my intense irritation of the early sections of Michael Dummett's book *The Logical Basis of Metaphysics*, where he takes time as a case where the meaning-first view must be correct. At the very moment I first read this, I thought to myself that time was actually one of the best examples of a metaphysics-first view instead: that you need a notion of a mind-independent, temporal reality of temporal ordering, temporal magnitudes, to elucidate temporal content and meaning. You couldn't give a good account of temporal perceptual content, except in terms of its relations to this mind-independent temporal reality.

And then I began to think about the issues more generally - is there a general abstract argument for saying that metaphysics must always be involved in the individuation of intentional content or meanings? And as it turned out there was such an argument.

But the view that metaphysics is involved doesn't always tell you how it's involved. And so for each particular domain, it can really be of interest to say how the metaphysics is involved in the individuation of intentional content. So in my last book, I try to do that for various different subject matters, at least those I was capable of engaging with. There is still a lot of other issues where we need to have a much better understanding of the nature of the relation between the metaphysics and the theory of intentional content.

Is that part of your future projects?

Yes, some of it is yes. I decided to make that last book very short and punchy, and there's a lot of domains left hanging: the normative in general, the status of moral norms, the status of logic. There are though resources in that book which I think if developed carefully enough can be applied to those other areas.

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