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Cross-cultural cognition

Human beings across the world, separated in space and time, evidently entertain very diverse beliefs, customs, practices, values, skills and see the world very differently, some would say they even inhabit different worlds. At the same time we also obviously share much of our biology, including our perceptual apparatus and our neurobiology. The fundamental problem that this poses is one that has important implications both for how we see ourselves and how we treat others, namely whether there are basic cross-cultural universals in human cognitive capacities or rather radical divergences within them.

That substantial problem implicates a second methodological one: how should we go about answering the key question and assessing possible answers? Some will say we have to start by investigating the similarities and differences between us and our nearest relatives, the primates, in the animal kingdom. Others will focus on children's psychological development, as the winner of last year's prize, Renée Baillargeon, does. Others will insist that to tackle the main issue it is essential to get as comprehensive a view as we can of the entire range of human societies as revealed by ethnography, by archaeology, and by history. I am not an ethnographer, nor an archaeologist, and of course I concede that without ethnography we cannot have a proper view of the full range of variety in patterns of thought and modes of cognition that humans exemplify. At the same time history, including the study of ancient civilisations - which is my own speciality - is in a better position

than ethnography to track diachronically some of the transitions that have occurred. So that is where I can hope to make a contribution even though on several of the occasions when transformations have been proposed, I take a deflationary view – as I shall explain.

But my methodological question was how can we achieve any stable understanding of others who seemingly inhabit such different mental worlds and indeed physical ones from our own? How can we be sure we understand what they say, even – where of course the ancient historian is at a disadvantage compared with ethnographers who study living populations who can, in principle, control the interpretations those ethnographers give of them? Is it not the case that as soon as we attempt to translate what they have to say, we are bound to distort that? There is no neutral language into which both their thoughts and ours can be rendered. We are bound to use the concepts we have, and is that not bound to distort theirs?

To see our way out of that dilemma we need a little philosophy, or at least a clear head. True, our conceptual framework is whatever it is. But it is not set in concrete, but eminently revisable, and indeed if we are to make progress on my substantial question we must and can set about revising it. Of course no translation is perfect. Even when two speakers share the same language, and maybe also the same background, mutual understanding is never perfect. Yet on the other hand there has been much exaggerated talk of incommensurabilities in this context as if they negated any possibility of mutual understanding. But even across rival scientific paradigms understanding is possible, even though one must always be on one's guard concerning shifts in the sense and reference of key terms. However, it is worth reminding ourselves that Copernicus understood Ptolemy perfectly well, as did Ptolemy his predecessors who

proposed different cosmological accounts, including the heliocentric theory of Aristarchus of Samos.

As a time-traveller in ancient civilisations I am very well aware of the particular difficulties understanding them presents, starting with the bias and the gaps in our sources. But what can I bring back from my ancient travels that can throw light on my fundamental question?

Greece and China, the two ancient civilisations I know best, clearly exhibit striking differences, though also of course big similarities, so they provide a good test-case for my problem of cross-cultural universals. Let me go straight to a question that is at the heart of cognitive capacities, logic. The Chinese engaged often enough in controversy in such fields as morality, how to preserve public order and what to do in the present crisis – and there is always a crisis is there not? But they show little signs of interest in formal logic, the explicit analysis of argument schemata, the study which Aristotle inaugurated in the West with his theory of the syllogism. Moreover Aristotle used his syllogistic to develop a concept of strict, that is axiomatic-deductive, demonstration, which starts from self-evident primary premises and proceeds by valid deductive argument to incontrovertible conclusions.

Nevertheless the effects of these developments should not be exaggerated. The possibility of diagnosing errors in reasoning did not mean that such errors ceased to be committed. That possibility does not justify the idea that this is a different logic. In fact any talk of different logics in the plural strikes me as a nonsense and even speaking of ‘prelogicality’ in the case of the Greeks before Aristotle and of the Chinese in general can lead to confusion.

Close attention to the situation in which Aristotle operated can throw light on some of his motives which were not all of a purely intellectual nature. Like Plato before him, he was deeply dissatisfied with

the arguments his fellow-Greeks exchanged in such contexts as the law-courts and political assemblies, where decisions were generally taken by the audience itself, often by majority vote, and where according to Plato and Aristotle the ‘mob’ could be persuaded of just about anything, Socrates’ guilt for instance. What Aristotle demanded was not merely plausible or persuasive arguments but incontrovertible ones, *anexelegktos* in Greek. But if we ask why the Chinese felt no need to develop any such axiomatic-deductive demonstration, part of the answer lies in the observation that there was no real equivalent, in China, of those public debates decided by majority vote. But that does not mean that the Chinese were not concerned with the problems of inconsistency and contradiction. To illustrate they refer to the story of a salesman who claimed that his lances could penetrate anything but also that his shields could withstand penetration from anything. Moreover even if they did not give Euclidean proofs in their mathematics, they verified their algorithms often enough. Once assured they were correct, they passed to the next problem unconcerned with some ambition to give their proofs an axiomatic basis.

I see no reason to doubt that humans have always reasoned, inferred, argued, disputed, persuaded. But the manner in which they do so, and the extent to which they possess explicit rules governing those practices, differ. But my ancient examples show that we can examine the circumstances in which that happens, without the need to postulate different psychologies, let alone different mentalities, which simply reformulates what has to be explained and does nothing to explain it.

But maybe one will object that this example is altogether too easy a one – that the real problems to do with cross-cultural relativities arise for instance with the developments that we typically associate with modernity, let alone with post-modernity, with the so-called ‘scientific

revolution' and with the new styles of thinking that Crombie and Hacking have done so well to bring to our attention. I would be the first to insist on the complexity of these issues, each of which requires a detailed examination of the circumstances surrounding its development. Probabilistic reasoning, for example, which in the strict quantitative sense does not antedate the 17th century, owed much to interests in gambling and insurance.

But although I cannot here present all my arguments on this topic, let me sketch out a further deflationary argument that will serve to introduce certain reservations to any idea that modern science represents a total rupture in cognitive resources. Three of Crombie's new styles were controlled experimentation, systematic observation and taxonomy. But in each case one may remark the important continuities that existed with what went before. Controlled experimentation develops from trial and error procedures that are common across the world. Systematic observation grows out of common or garden observation. Since La Pensée sauvage no one can be in any doubt about the extraordinary talents for taxonomy found in societies spread across the world. More generally, despite Goody's argument that literacy favoured the growth of a critical and sceptical, there is plenty of evidence for such a spirit in just about every society we can study.

I conclude that we should not jettison either of our starting intuitions, the recognition of commonalities in cognitive capacities but also that of diversity in performance. We should not think that we have to opt either for the view that the diversity is a mirage or that the universality is, but rather see how they can be reconciled. Of course I cannot in a brief talk hope to persuade you of my deflationary arguments. More importantly I am acutely conscious of the further work that has to

be done. But I hope that those who will do it will find my suggestions useful.