

How useful is it to invoke evolutionary explanations for morality?

Helen Haste and Emma Cohen disagree

Dear Emma,

Current work on the psychology of morality increasingly convinces me that evolutionary psychology is a blind alley and scientifically dubious.

I have of course no doubt that human physiology (including brain processes) evolved during the Pleistocene era, and that some of the *propensities* behind contemporary human behaviour also evolved. However, trying to find an evolutionary 'explanation' of modern human behaviour is an illusory Holy Grail.

First, it depends on speculation about the nature of hunting behaviour and social organisation in the Pleistocene – and therefore what was 'needed' for survival. The argument is that the ecological logistics of the lives of contemporary hunter-gatherer societies or primates (mostly chimpanzees) have parallels with prehistorical conditions. But neither today's hunter-gatherers nor chimpanzees are our 'ancestors'; they are products of as long a period of evolution as the educated Western scientist. We should be most cautious in how we use these data.

A second argument is that, if a pattern of behaviour is found across many societies in different cultural contexts, it must be rooted in our 'nature' – cue another evolutionary explanation. But it is scientifically more sound, and more useful, to pursue *researchable* questions about what exactly that behaviour means in different cultural contexts, rather than worrying about putative origins.

Yours, Helen

Dear Helen,

The recognition that our brains were shaped by natural selection has led to an explosion of research and interest in the evolutionary origins and development of many different types of human behaviour. Unlike you, I am not of the persuasion that methodological limitations render such endeavours futile.

Rather, I am enthused by the ways in which evolutionary theorists have developed increasingly sophisticated and varied solutions to the most obvious methodological problem: none of us was around to observe what happened in our species' past.

The available arsenal of tools goes much beyond the dubious practice of taking modern hunter-gatherers as stone-age relics, and combines a wide range of methods from the biological, cognitive, and social sciences. The project is not unlike that of a detective or archaeologist who seeks to position fragments of findings in a wider causal context. Are these practitioners of reconstruction also necessarily chasing illusions?

Questions about whether certain kinds of behaviours and propensities may have been favoured by natural selection are complex. But they are potentially illuminated from many different perspectives. If the data converge upon a single point, then this is suggestive of their potential usefulness for understanding the causal underpinnings of the behaviour in question.

I am persuaded that such projects are truly taking shape in the evolutionary psychology of morality.

Yours, Emma

Dear Emma,

I think a major concern for me is reductionism. Evolutionary explanations can at best only be very broad brush, and focus only on propensities to perceive certain stimuli, or to respond to them only in the most general terms. (No-one, as far as I know, claims evolutionary explanations for primate behaviour).

Neuroscience data tells us, at the moment, only about where certain processes occur, not how, and the main evolutionary message there is that our brains are highly adaptable, and both function and structure may be modified by our experiences.

For four decades, research on moral reasoning has given us a nuanced understanding of how our appreciation of intentions, fairness and responsibility develop. An evolutionary approach seems only to offer the rather banal conclusion that humans don't like to harm other humans – at least, in their ingroup.

Attention is now being paid to moral emotions. It will be exciting to explore how reason and emotion interweave in moral processes. But the main evolutionary message seems to be that, as emotional responses are so swift they must be 'hardwired' and so 'explained' as a Pleistocene survival mechanism, rather than explored in the context of wide cultural variations in what should be the target of our love, fear or disgust.

Yours, Helen

Evolutionary psychology attempts to explain mental and psychological traits as the products of natural selection

Dear Helen,

You appear to eschew evolutionary explanations on account of their imprecision, yet are opposed to accounts of the precise mechanisms underpinning behaviour.

Evolutionary approaches promise to account for why an organism displays certain behavioural traits and not others. This problem becomes no less interesting if we are talking about an evolved mechanism that produces a broad range of potential behaviours, depending on the particular conditions in which it operates. An inflexible organism inhabiting a flexible world is a recipe for extinction.

Evolutionary theory does not supersede neuroscientific, cognitive, or social scientific approaches, but integrates them within a unifying framework. This framework facilitates exciting, testable, precise, novel, unified - *anything but banal* - understandings of why, how, and under what conditions we gossip, cooperate, cheat, punish and reward, help and harm, feel guilt, shame, compassion, and gratitude, and judge right and fair from wrong and unfair.

These understandings are not – indeed could not be – developed exclusively with reference to genes and ‘hard-wiring’. Because we have been designed to respond flexibly to our environments, evolutionary explanations can and do encompass the variable influences of social and cultural environments.

We should not forget, however, that there is much about human environments that holds constant cross-culturally and throughout human history. The enduring fact of our dependence upon others for our very survival, and the recurrent evolutionary problems that this engendered, are at the root of our evolved, species-specific social-cognitive mechanisms and capacities.

Yours, Emma

Dear Emma,

Beware of grand theories of everything; the history of science is littered with their corpses. Such theories inevitably have to seek an over-simplified common denominator, and they suffer from confirmatory bias – looking for supporting, not disconfirming, evidence.

At root, my objections are to the circulatory nature of the arguments, on top of the layers of speculation. You talk of precision and testability. Indeed, we have great data on contemporary human behaviour, including increasingly, evidence for which parts of the brain are involved. We can see how this all serves functions in modern human life.

It's perfectly scientifically respectable to speculate from these data to what life may have been like in the Pleistocene, even without direct evidence, and generate plausible stories consistent with ‘survival’ then. But what you are then doing is turning it back, in a circle: because these stories seem plausible, they therefore become legitimate causal explanations that we can apply to contemporary life. Yet the stories derive in the first place from extrapolations from contemporary data, filtered through massive and often unquestioned assumptions from our contemporary experience. Further, these ‘stories’ then frame how we interpret our data.

This is not science, it's a circular argument and self-fulfilling prophecy.

Yours, Helen

Dear Helen,

These are valuable cautions for any scientific enterprise. Although a theoretical framework should not be dismissed, in principle, on account of its grandness or speculativeness, circularity certainly gets us nowhere fast.

Doubtless, some evolutionary accounts of human behaviour conclude where they started and are best ignored. But we have more resources available to us than modern behavioural data, brain scans, and fabrications about the past.

There is an increasingly sophisticated body of genetic, fossil, and climatic data about the environments in which our ancestors lived, the survival problems they faced, and the resulting problem-solving adaptations that emerged in our lineage.

Ultimately, adaptations – products of random variation and non-random selection – exist as part of our nature. If we are agreed on this, then let the science proceed.

Some theories will run within the public media before they can crawl within academia. I suggest, however, that the premature popularity and sloppiness of some attempts does not justify a blanket indictment on the emerging science of human cognitive origins at large.

There will surely be many blind alleys. But better to be able to say that than to say nothing at all.

Yours, Emma



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