

The Myth of “Natural” Behavior



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Academia: As our understanding of science improves, the boundaries between the human and animal worlds are becoming increasingly blurred.

That's right, thanks largely to Jane Goodall, Dian Fossey and Birute Galdikas. Back in the 1960s and 1970s, they studied primates under the guidance of the British anthropologist and palaeobiologist Louis Leakey. Goodall is especially noteworthy in the field, even though when Leakey first dispatched her to the jungle, she had no qualifications beyond a secretarial certificate. In spite of this, she became the first person to spend much of her time sharing a natural environment with chimpanzees. Leakey hoped that observing these wild, dangerous animals would help us understand ourselves better as humans, but that wasn't to be the case: we learned more about our distant cousins. Goodall had no formal background when she set off: for example, she had no idea that researchers believed that their subjects must not be anthropomorphized, so she gave the animals names and made note of their different personalities and any animosities rooted in more than the simplest desires to eat and copulate. She confirmed something that most pet owners have long known: that animals have their own likes and dislikes. After six months, her observations forced even the most conservative scholars to start redefining the concept of humanity.

When Goodall discovered that chimps use specially selected sticks to catch and eat termites, she telegraphed Leakey with the news that she'd observed the animals using tools. This flew in the face of the former widespread conviction that humans were the only species capable

of such behavior. The scientific community was perturbed that a woman with no formal education could attempt to redefine such a fundamental concept as humanity. To silence the objectors, Leakey arranged for Goodall to earn a PhD at Cambridge. She obtained a doctorate in ethology, despite having no previous degree. Fossey and Galdikas, in turn, studied gorillas and orangutans, with other researchers following suit and focusing on animals with more complex social structures. They wanted to study their intelligence, but frequently had no idea how to do it.

This is a major problem. In one well-known study looking for the conscious “self” in dogs, the animals were placed in front of a mirror; since the researchers didn't observe a response, they drew negative conclusions. No one thought to investigate the animals' other senses which they rely on more than sight, such as smell. Put simply, the researchers made a preliminary assumption that dogs would respond the same way as humans.

Researchers encountered similar problems when studying birds, which weren't resolved until the 1990s. They couldn't work out why the blackest ravens and blackbirds appear to enjoy a greater reproductive success than paler individuals. It turns out that the birds' vision includes the UV spectrum, and as a result they can distinguish more shades of black than us.

And so on the one hand, we have a tendency to anthropomorphize other species' cognitive systems, while on the other we frequently don't anthropomorphize enough. For example, many people took issue with Goodall's habit of giving chimpanzees names instead of numbers and ascribing them human motivations, describing her as unprofessional and overly emotional. And while it is difficult to report that an animal does something because it enjoys it, it is equally difficult to argue with such a statement, since not all behavior has a practical purpose.

This reminds me of the discussion about evolutionary explanations for the diversity in the shape of women's breasts.



Prior to Jane Goodall's work, it was widely believed that humans are unique in our use of tools. Today we know that we are just one such species

It remains a mystery, and it seems to be largely unrelated to their basic function. Surprisingly, when less food is available, breasts lose fat tissue at a slower rate than other parts of the body. This suggests that in evolutionary terms, their volume is worth maintaining, perhaps due to their role in sexual selection.

As for their shape, things are more complicated, although it is possible that it also plays a similar role. For example, in cultures where women don't wear bras, breasts are quickly affected by gravity, so perhaps pert breasts are evidence of a woman's younger age and, as a result, greater fertility. When it comes to selecting sexual partners, there must be something for both sides to notice about one another. For men it tends to be women's breasts, while women are attracted to their potential partner's height. It's worth noting that there is no biological reason for men to be taller than women by an average of 8cm, since you don't need to be tall to be strong. And yet shorter men tend to be less popular among women.

This brings us onto the subject of sexuality. Let's start by saying that sex does not necessarily have to be linked with reproduction or fertility.

This is a relatively new discovery. The current belief is that there are just two other animal species that have sex for pleasure – that is at times when the female is not fertile. They are bonobo chimps and bottlenose dolphins. We now know that for them, sex plays a role in forming relationships. Bonobos, our nearest relatives, use sexuality similarly to the way humans use violence: they use sex to solve problems within the group. However, unlike humans' propensity for violent behavior, they also use sex to form social bonds.

So sex has a social significance. Is achieving an orgasm equally important?

Of course! In one experiment, female chimps were connected to equipment which brought them to an orgasm at a press of a button. The equipment soon had to be removed, since they used it constantly, wearing themselves out.

In all the primates studied, including humans, brainwaves recorded in females experiencing an orgasm look extremely similar. Following their experiments on chimps, researchers started looking into links between pleasure centers in the human brain with other regions, making several fascinating discoveries. For example, it turns out that the same part of the brain is stimulated when we experience pleasure and carry out acts of violence. Studying sexuality is extremely difficult: we need to analyze what we want to do, what we might like to do, and what we feel permitted to do. Our behavior is closely tied to fantasies, which poses the question: do our fantasies remain fantasies because we genuinely don't want to act on them, or because we are restrained by factors such as social norms?

It's often difficult to find a straightforward answer in biology...

In recent years, many researchers have made the mistake of trying to explain everything in terms of genetics. This has resulted in myths such as the gene for homosexuality. But what would such a "gene" determine? Behavior, fantasies, or perhaps something in between? We must remember that genes encode amino acids, while sexuality is an extremely complex combination of culture, biology, consciousness and subconsciousness;

Human and animal sexuality

it involves feelings, behavior, emotions, beliefs, physiology, and much more. Sociological and biological research into sexuality are quite distinct. There have been some excellent sociological studies conducted among children brought up in gay families. The team led by Dr. Nanette Gartrell from the University of California analyzed data collected over a period of 25 years. The analysis reveals that not only are these children no different from those brought up in heteronormative families, but, statistically speaking, they are actually slightly better adjusted. One possible reason is that since there are no accidental or unwanted



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In marmosets, females have two partners each, and always give birth to twins. None of the adults know who the father is, and the group lives in harmony bringing up the young

pregnancies in single-sex families, there is a higher probability that children will be cared for. Other common myths dispelled by science include the stereotyping of gay people as more promiscuous than straight, or the claim that heterosexual men have more sexual encounters than heterosexual women. In one study, a statistically-significant number of men and women were asked about the number of their sexual partners. Men typically claimed to have had seven or eight partners, while women said just three or four. In the next part of the study, the participants were asked the same question while being connected to a polygraph (even though for ethical reasons it wasn't switched on). This time there was no statistically-significant difference between the answers given by men and women.

Why?

Because even during anonymous tests, people tend not to give honest answers, preferring instead to say what they feel is expected of them. There is cultural pressure on men to have many sexual partners, and on women to have as few as possible. In this study, the risk of being caught out by the lie detector was sufficient to encourage the participants to give honest answers instead of under- or overestimating the actual number

of sexual partners according to society's expectations. This shows that researchers need to be careful when designing their studies.

Of course this also applies to natural sciences. Biological research into sexuality focuses on hormones; one particularly persistent belief – that men's enjoyment of sex is driven by testosterone – has turned out to be false. Hormone levels alone are insufficient to determine sexual behavior; the number and activity of cellular receptors responsible for allowing the hormone to perform its biochemical function are of equal importance. Other biological research, conducted by Dr. Henry E. Adams' team at the University of Georgia, reveals how extremely homophobic people respond to subliminal homosexual stimuli. It suggests that homophobia very likely stems from the person's concerns with their own sexuality. This is a very significant result, not least because homophobia is a major social problem. And it doesn't just affect gay people; it has an impact on all social discourse.

It is important for researchers – not just in social sciences – to be aware of cultural complexities. Until recently, the entire body of research into our species was conducted purely from the male perspective. This included the theory that early humans "lost" their fur because they got too hot chasing buffalo across the African plains.

That's right; as discussed by Sarah Blaffer Hrdy, the American anthropologist and primatologist, the human exceptionalism theory had been studied exclusively from the male perspective. Until recently, researchers had assumed that in early human societies, social groups focused around the hunters and warriors, and hadn't studied more typically female pursuits. Hrdy was the first to re-examine the theory from the perspective of the "second gender."

Numerous sexist myths persist in evolutionary theory. We like to think of scientists as professionals in white lab coats, impartial, analytical and using absolute knowledge, but of course it's not as simple as that. They have also grown up in and live as part of society; they have internalized certain norms, even if they aren't conscious of it. And when we aren't conscious of something, we cannot notice how it affects our own experiences. Until the 1960s, culture was entirely driven by patriarchy, therefore researchers working on evolutionary theory unconsciously based their work around it.

*One dangerous theory, unfortunately still being reiterated today, strives to explain rape in terms of sexual selection. As it is, the chances of a one-off forced sexual encounter being "fruitful" are very low, and in fact regular sex with one or a limited number of partners is far more likely to result in procreation. And since children require regular care for around the first seven years of their lives to increase the chances of survival of the genes, parents need to invest at least that much time in their upbringing. At least that was the case in the evolutionary environment where *Homo sapiens* formed as a species.*

In harem species, a far better strategy is for males to make sure they please their females. In chimpanzees, males that are lower on the hierarchical ranks are frequently so amiable that the females are more likely to hide away and copulate with them than with more dominant males. In pygmy marmosets, a polyandrous monkey species, females have two partners each, and always give birth to twins. None of the adults know who the father is, and the group lives in harmony bringing up the young. And yet marmosets rarely feature in popular discourse about the natural world.

That's right. And the argument that something is "natural" or "unnatural" is frequently used when people want to impose certain behavior on others.

I agree. The word "natural" is used far too often to open doors to discriminating against minorities. Bonobos and humans last shared a common ancestor around seven million years ago. We mustn't forget this distance, especially since we are also separated by our evolutionary environments. Chimps continued living in forests, while humans came down onto the plains; humans started walking on two legs, while chimps never quite left the trees.

Hrdy claims that what really separates humans from other primates is the time mothers spend in direct physical contact with their newborns. For bonobos this tends to be around six months, yet for humans this is simply impractical. Human babies are adapted differently, both biologically and socially. Our social structure is arranged so that newborns are cared for by more than one person. Groups of up to 30 people couldn't afford to lose even a single member for prolonged periods of time, since supplying the group with essential calories was an important function, usually

performed by women. As such, mothers couldn't take out three years to care for their babies, so children being cared for by several trusted people is behavior that's long been perfectly natural in humans. One of the best things we can do today is set up nurseries and kindergartens; sadly, many such places have closed in Poland since 1989, alongside claims that it's more natural for mothers to stay at home with their children. None of the people so claiming are biologists or anthropologists, but the concept has still entered popular discourse.

In our culture, mothers are regarded as primary care-givers.

Yes; we frequently discuss the maternal instinct, even though there is no scientific basis for the term. On a hormonal level, new mothers secrete oxytocin, sometimes known as the attachment hormone. However, most people don't realize that men also release oxytocin when they are in contact with newborn babies. It doesn't even serve the same purpose as in women, for whom it helps soothe the physiological trauma of child-birth. Of course men's bodies respond the same way whether they are in contact with their own children or not; arguably, it could be said that this means men are better suited to being care-givers than women.

Is there any point at all in drawing comparisons between humans and other animals?

I do take issue with that, yes. We are our own species, and what we do is natural and we should not have to make excuses for it. On the other hand, research into sexuality and comparative sexuality does make sense. Sex is important, and science has some way to catch up to demonstrate that our preferences are perfectly acceptable, whatever they happen to be - as long as they don't harm anyone else and are consensual.

Interview by **Patrycja Dołowy**

Further reading:

- Hrdy S.B. (2009). *Mothers and Others: The Evolutionary Origins of Mutual Understanding*. Cambridge: Harvard University Press.
- On the "Marmoset Conundrum": goodmenproject.com/ethics-values/the-marmoset-conundrum
- Pawlowska M.M. (2010). *Postpartum Haemorrhage: Low-tech Interventions, High Potential to Save Lives*. Global Maternal Health Conference. Commentary. Cambridge.