

## Beyond Words

*What Animals Think and Feel*

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Do animals have consciousness? Do they think, do they feel? Descartes famously made a distinction between humans and animals. The former had souls, which were not materially based, while the latter were mere automata, mere matter in other words. This led to the notorious Cartesian duality, replacing one mystery by two, if not by three considering the interaction between mind and matter. It also conveniently removed animals from our sphere of ethical consideration, and confirmed that man was apart from nature, and hence the latter was at his disposal. This Cartesian view survived the Enlightenment, in fact it was very much in compliance with its ideals, namely that of the supremacy of reason, on which only humans had a claim. Darwin changed that, although the change was late in coming, as the initial shock took a long time to subside, and the real lesson of Darwinism took its time to sink in and be properly understood. After Darwin it was no longer as easy to claim that man was apart from nature, on the contrary he was very much part of it, and the uniqueness he took for granted was his no longer.

How do we know that others have mind? That they think and feel and have minds of their own? They tell us so, in no uncertain terms, but how can we be sure that they do not fool us? How sophisticated must a decoy be before we are fooled? Animals cannot tell us directly in our own language that they think and have feelings, but if we take the trouble to observe them closely over time, the indications that they are indeed conscious, have feelings and thoughts are overwhelming, and the burden of proof would logically fall into the laps of those who deny such conclusions from the abundant evidence available. Evidence which for many species have only become available in the last few decades.

Now the urge to anthropologize animals is of course ancient, and especially as children we have a sentimental impulse to confer on animals human feelings and motivations, although of course animals are mute and only able to speak in fairy-tales and fables. There is thus a very strong component of wishful thinking and a concomitant readiness to too easily accept claims that seem to bridge the chasm that seems to separate us. As a child I was fascinated by the stories of Dr. Dolittle, who could speak to animals<sup>1</sup>. Although I never took them literally of course, the idea was very sympathetic to me, as it was no doubt to countless other children. Yet the evidence of something going on is psychologically overwhelming to anyone with closer contact. But is it really a case of hard scientific facts not just soft subjective speculation? The author is very anxious, after all having been

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<sup>1</sup> They were written by Hugh Lofting (1886-47) a civil engineer by training and profession and were started during his time in the trenches of the First World War. A total of ten books were published between 1916 and 1933, and after his death some volumes were posthumously collected from his *Nachlass*. I only read two of them in a Swedish translation in the early sixties

raised in a strict non-speculative tradition he does not want to make a fool of himself. A large part of that anxiety is due to a mistaken idea of what is science, and the extent of its influence and relevance. The idea that science is a strict method, characterized by uncompromising objectivity especially with an emphasis on the measurable, and the only method there is to achieve secure indubitable knowledge, is a caricature. The very fact that the burden of proof has been moved to the doubters gives an indication that it is not really a scientific question, at least not in a narrow technical sense. The existence of other minds is more of a philosophical, not to say religious question, than a scientific. It is not ultimately through science we infer minds behind the appearances of other humans, but through instinctive sympathy. This does not mean that science plays no part, on the contrary, only that it cannot be settled by it. What is interesting about consciousness and emotions is precisely their subjective nature, that they are being felt, that another beings existence is not just a matter of inference but is actually felt by that being. We can of course not feel his thoughts directly but it is important to us that those thoughts exist as a subjective experience, it is only then we can respect and be moved.

When intelligence and emotions are concerned we are looking primarily at other mammals, in fact exclusively at other social mammals, although cows, sheep and even horses do not rank high on such lists. Primarily other primates, especially our closest biological relatives such as the apes, but also at wolves, elephants and whales with huge brains, and less insistently on pigs, which apart from primates, seem most closely related to us. This does not mean that other types of animals, such as birds cannot be smart. In fact birds of the crow family do as well on tests as chimpanzees and many humans, showing remarkable abilities of purposeful reasoning when it comes to extract food from artificially contrived situations. But of course when it comes to brains mammalian ones have roughly the same architecture, while avian brains seems to be built on other, possibly more efficient, principles. However, when it comes to the basic building blocks of brains, they have a far more distant provenance. Nerve cells are basically the same, as are the hormones that regulate moods, which we share even with primitive creatures such as worms. This is the Darwinian lesson, we are not unique, our biological features are shared with other creatures, and there is no compelling reason to assume that they would have radically different meanings in non-human contexts.

When it comes to cognitive powers animals often trump us, in particular exposed to a much more varied and hence richer world of sensory data than we have access to. As mammals we have excellent eye-sight, but birds of prey have far keener ones, providing a resolution we can only dream about. Our sense of hearing is rather poor, the window of frequencies we can appreciate rather narrow. When it comes to smell, we are indeed very handicapped, and when mammals are concerned this is the primary sense through which they experience the world<sup>2</sup>. An finally there are senses, such as sonic radars, of which we unlike bats and whales, have no experience. Then it is quite possible that many animals have better memories than humans, able to keep more data simultaneously in their minds, maybe even to think and calculate quicker. When it comes to agility we are of course no

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<sup>2</sup> So impoverished is indeed our conscious awareness of smells that it is speculated that we are indeed subconsciously affected by them, especially when it comes to matings and choice of partners, not infrequently rationally incomprehensible to the couples themselves.

match to mountain goats and cats. Yet, it is the presence of an inner life and concomitant emotions that really fire our imagination.

Most people have direct contact only with dogs. The interaction with dogs is of quite a different nature than that with cats, even among people who prefer cats to dogs, and even among people who dislike dogs. It is not based on choice exclusively. Anyone living with a dog cannot deny that they have consciousness, independent will, a certain amount of reasoning, but above all emotions, the latter being the real reason people relate and if need be appreciate them. Dogs are, unlike wolves, imprinted on humans, they want to be of service and are very much attuned to their human handlers. You communicate with dogs not formally through a shared vocabulary (although with some patience a common vocabulary may be accumulated, although it can only be used one-way) but through shared emotions. A dog may not catch your words, but surely the intention behind them and the mood with which they are uttered. In particular it can tell whether you are angry or not. This is not such a mysterious thing after all, we humans have no difficulty sensing that somebody is angry with us, even if we do not understand a word what the person is saying to us. One may try and formalize it through the notion of body-language, but this is a somewhat false analogy of language as it seems more innate and universal than special and acquired. Now dogs are well-known and in a sense not that interesting, as they are not wild but domesticated. Obviously they are descended from wild wolves and it is suggested that the process has taken some 15'000 years. Wolves and Humans occupy very similar ecological niches and their social structures are also very similar. Thus it seems likely that early on there developed a symbiosis of wolves hanging around small human settlements being rewarded by scraps of foods as well as also reciprocating by assisting in hunts. This symbiosis instigated a new evolutionary direction, encouraging friendliness and emotional dependence and a host of other features more or less genetically accidentally linked. Thus domestication is not merely taming, this is on an individual basis, but a genetic modification over a large number of generations involving an emerging subspecies. It is noteworthy that only a handful of mammalian species have been domesticated by man, in addition to dogs, we have cows, horses, sheep and goats as well as pigs. That is it, over thousands of years. What has made it possible is the social structures of the species, structures that have been co-opted for other purposes. Other animals have been tamed and put to service, such as Asian elephants, but this is far from domestication. Breeding in captivity is a problem as Zoo directors can certify. Domestication means that an animal becomes less self-reliant, in fact its brain size diminishes, as well as overall size and strength, its way of life and culture becomes more dependent upon that of man and as a consequence impoverished. It is all a consequence of a softer and more protected life style. One may also argue that man may have co-evolved and become more adapted to dogs (the author quotes our readiness to react to the signs of dogs such as tail wagging) although of course not as much as the other way around. More interesting though is to speak about man's self-domestication. Our forefathers had larger brains as well as bodily strength and were far more resilient. The evolving culture of man has also created a protected environment more tolerant towards weakness than the original. Thus one may talk about a long-term genetic change, although not a very significant one during the tenor of modern man, and hardly one effected by recent technological innovations and

linked cultural changes, although of course if sustained they may in ten thousand years or so effect noticeable changes, continuing a trend towards a feebler bite and dental garniture as well as a flattened face and weakened muscles. It is important to keep in mind that although humans as a collective has brought about dramatic changes, including a take-over of the world threatening to reduce its biological diversity to dreary monocultures, as individuals humans are not outstandingly clever and as for survival on their own strikingly incompetent.

Systematic observations of animals in the wild did only originate in the 60's. One thinks of Jane Goodall studying chimpanzee, Dian Fossey studying mountain gorillas. In fact regular studies of Elephants, Wolves and Killer has been going on for more than forty years, typically by committed people learning to identify the animals as individuals. This is of course time-consuming and one surmises tedious work yet ultimately rewarding. With those long range studies you get to know the antics of the wild animals in great detail, and you will in particular be astonished by the great variety of individual temperaments and idiosyncrasies, as well as witnessing actions of compassion, altruism and planning. Common to all of those are intricate hierarchical structures in social groups, which tend both to fission and fusion depending on circumstances. Why look for extra-terrestrial intelligence, when there is alternative terrestrial intelligence once we take the trouble to observe? Of course one should not confuse the minds of animals with human ones. Elephants are not just humans caught in strange forms, but something much different, yet close to human to make those differences fascinating. Animals do communicate with each other using different calls for different situations, and there remains much to be discovered and deciphered. Of course they do not use human type language, although in intriguing tests they seem able to acquire some human, such as sign language or pushing buttons, showing a rudimentary command. Of course what they can communicate on human terms is rather limited, on the other hand humans have not made much progress communicating on their terms. But of course language is only one channel of communication, and maybe the ones used by animals may still be unknown (and maybe even as unknowable to us, as the intricacies of human language may be to them).

We learn about Elephants that they form cohesive groups each led by an old female who knows a lot due to her extended experience. Thus when an old female dies, be it through natural causes or through mindless poaching, it is a big loss to her group, and if there are no other older females to take over, the result may be disastrous, and the individuals may only survive by splitting and fusing with other groups more viable. So a group contains the female off-springs and the young males. When the males reach puberty they split off and become free-ranging only seeking out females when in musth, meaning being sexually aroused. Females only respond to males in heat, and larger males have an edge, because Elephants keep growing well beyond the onset of puberty and adulthood. African Elephants are significantly bigger than their smaller cousins the Asian Elephants, and fully grown males are significantly bigger than their female counterparts. In fact they may stand 4 meters tall by the shoulder and weigh up to 6 tonnes, while females may stand 2.5 meters and weigh over 3 tonnes. They also get to be rather old, normally over sixty in the wild. Pregnancy lasts for almost two years, and after that there is a period of two years of rearing babies when the female is not interested in sex. Thus under the most

favorable circumstances, a population of elephants cannot double in less than eight years. Traditionally there used to be millions of elephants spread over most of Africa, in fact up to the eighties there were almost a million, but lately poaching has taken a serious toll, and threatens extermination within decades. Their habitat once contiguous has fragmented, and the reserves that exist are far too small for those wide-ranging animals. And of course even in reserves they are not safe. The Masai have traditionally protected elephants, in fact thinking of those as the only creatures in addition to man, having souls. And of course a nature reserve can only have so many guards, while the Masai may summon thousands of protectors. Thus it is crucial that good relations are maintained between conservation people and local populations, which has recently not always been the case. Poachers are out for the tusks, ivory commanding high market prices. When all trade with ivory was prohibited, the ivory economy collapsed in the early 90's, but when a series of one-time exceptions of selling stores of harvested ivory, the ban became ineffective as laundering illegal sales became possible, and as a result the threatened populations were once again being depleted, in some regions, the numbers have plummeted<sup>3</sup>. Ultimately there will of course be a conflict between men and elephants as to land, but still there is enough free land to support much higher numbers. Thus the depletion of elephant stock is a tragedy, as it seems in principle avoidable, a tragedy especially in the light of there being more than enough reason to suspect that elephants as individuals possess rich inner lives. To read about the cruelty with which Elephants are subjected is sickening. I recall seeing many years ago a documentary on Elephants being culled on reserves in order to maintain a suitable density. It was horrible. It is of course far more painful to watch an Elephant, a big animal filled with strength and vitality, being killed than a mere human who will fall at the first shot. The death struggle of the Elephant is extended and palpable, and one is reminded of the most moving piece ever written by Orwell, about shooting an Elephant in Burma.

Wolves are not immediately threatened, there are vast reserves in Canada and Siberia, yet on the fringes they have been exterminated by an unparalleled ferocity, such as in the lower forty-eights of the US and in Scandinavia. While dogs are well loved, wolves, who do not care for humans at all, have traditionally been shunned and feared, far more than any other wild animals, including lions and tigers. In Scandinavia wolves have in recent decades been reintroduced, much to the consternation of local people, whose belligerent aversion towards those creatures, who do not pose any danger to man, clearly is non-rational. Wolves were introduced from Canada in the seventies to Yellowstone, where they had long since been exterminated. But once again against the wishes of local people, who to a large extent still see them as a vicious pest (although it would be tempting to consider those as vicious pests instead, far more deserving of extermination). Anyway extended observations have revealed intricate social structures among those very resilient and tough creatures. Much has been said about alpha-males and females, those that lead packs. But contrary to vulgar opinion. Those alpha-animals are not characterized by any ferocity per se, the qualities they need are of a far more constructive nature, such as superior knowledge and

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<sup>3</sup> The policy of shooting poachers on sight instigated by Leakey initially worked as a deterrent, but lately the poachers have stopped using guns, which give them away, and instead taken to use poisoned arrows.

skill, as well as an ability to command authority and leadership. In fact the social lives of wolves seem rather close to those of aboriginal man, before the onset of culture. And in fact the sociology of a wolf-pack shows stunning similarities with that of humans. And once again, long-term observers are struck by the level of individual variation. As with elephants, packs tend to fission and fuse, and when a leader, be it male or female, is killed, this usually means the obliteration of the pack. The lives of wolves are tough, and they do not live that long. One particular super-wolf, a strong alpha-male died eventually a natural death at the age of thirteen, which is a very high age for a wild wolf. In hunting they display great ingenuity involving not only advanced planning but also co-operation. Many different calls between wolves have been identified, but clearly there is much more to discover, as communication cannot be confined to sight and sound alone, as smell plays such an important role for most mammals, constituting a world man is largely a stranger to. Wolves are tough, they can sustain serious damage and still survive. A broken leg would stop most humans from action, but not a wolf, who will just grits its teeth, after all having no choice but to bear the brunt of the pain.

Finally there are Killer Whales, of which mankind until quite recently have been in the dark. The intelligence of dolphins made a splash in the 50's, and they became much sought-after performers in Sea-World circuses. Then it was discovered that anything the dolphin could do, its bigger relative the Killer Whale, or the Oca, as they are preferred to be called by their aficionados, could do much better. In recent decades their intricate social life has been revealed to observers (the fact that they spend much time under water make of course direct observation much harder and only possible through more advanced technology). Once again we see unmistakable signs of compassion among them, strong bonds between individuals, especially between mothers and recent off-springs, playful interactions, including non-procreational sex, the latter more plentiful than among humans. The former practice of keeping them confined in water-circuses, is revealed as utterly inhuman. Remarkable Killer Whales have never been known to attack and kill humans, although they should have good cause to do so, as with equally restrained elephants and wolves. The diets are restricted and vary from pods to pods, subspecies to subspecies. Some only feed on particular salmon, others attack other sea-living mammals such as sea-lions and seals, or even dolphins. Killer Whales have large and intricate brains, as do other whales, the organizations of which, are as yet hardly touched upon<sup>4</sup>. They also communicate by means of senses totally unfamiliar to man, such as sonics, reminiscent of the senses employed by bats. However, they seem to have no sense of smell. Thus the channels through which most whales interact and live are untouched by man. As noted before, it is one thing to try and teach animals to communicate on human terms, quite another far more challenging and humbling, for humans to communicate on their terms. But is time running out? Whales are hunted, they are caught in commercial fishing, killed wantonly or through the mindless exercises carried on by navies dropping charges into the ocean, killing everything within miles. Add to that a depletion of their natural habitats, due to over-fishing, and indeed, through the vast regions of the seas, they are to be counted in their hundreds. Killer Whales, like Elephants reach mature ages, well into their sixties,

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<sup>4</sup> It is significant that the Greenpeace movement started out as a reaction against the commercial hunting of whales

some have been suspected to be even older in their seventies and eighties, and even beyond. Those old creatures, like their Elephant counterparts, grew up in a very different world from which they now live. They are intelligent enough to realize that, and one can only speculate as how this will affect them. Reading about social animals and their tribulations at the hand of man, one can only wish for the extermination of the latter, who in no sense add to the lives of animals, although the death of the latter, would greatly impoverish mankind.

The great existential question, already touched upon, is whether individual elephants, wolves and orcas, are in some sense as intelligent and emotionally endowed as individual humans. There is a collective intelligence that has created the culture and technology, the fruits of which individual humans can now enjoy. Intelligence may be accumulated and collectively developed, with emotions it is different. True humans cannot survive unless in a social context, and one can argue that much of individual emotion is of a social kind. Animals do have cultures and they do use tools, still of course those cannot be compared with that of man. But is culture really genetically predestined? Could mankind still in principle live in the wild way to which it was evolved? Some stone-age populations have survived more or less intact until the present age, and but for the penetration of modern cultural man to all corners of the earth, would still be unaffected. Has culture evolved accidentally? If there had not been an agricultural revolution that profoundly affected the way man lived, would culture and civilization have arisen? Now if you compare primordial hunter and gathering tribes, their differences from other social animals we have so far discussed, do not seem so obvious. From an ethical point of view the encounter with primitive people, in the sense of living in a state of nature, presents some dilemmas. Originally such encounters resulted in extermination, if there were not too many of them, unlike say with the Tasmanians, but even today whatever you do is bound to be wrong. To impose our civilization seems cruel and aggressive, on the other hand to withdraw the blessings of it, seems equally cruel and negligent. At least with animals the much maligned notion of apartheid seems no longer so bad, in fact eminently relevant. Unlike with other human tribes, we can leave them alone with a good conscience. They do not need us.

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