

WILD LEADERSHIP

**WHAT WILD ANIMALS TEACH US
ABOUT LEADERSHIP**

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To Robbie.

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INTRODUCTION

In my work as an animal carer, zookeeper and curator, I have been privileged to work with a large and inspiring range of wild animals. More than three decades of observing animals in the wild and under human care has given me much to think about, particularly in terms of social groups and how leadership works in animals. What makes a good leader? Why do animals follow this particular leader? Why are some animal leaders replaced more violently than others? How and why does leadership differ between species and under different circumstances? What are the most common beneficial traits of wild animal leaders and why does any of this matter to us? I share these animal insights hoping that people are encouraged to evaluate their leadership styles in light of the principles we see in nature.

As a young zookeeper in the 1980s it was very much frowned upon to talk about animals having feelings or being driven by emotions. We were to observe and describe what we saw objectively without being anthropomorphic. However, if you work closely with wild animals, as zookeepers do, it is impossible not to identify the emotions you see in them. Spending my days watching

and caring for animals, I saw regret, love, mistrust, jealousy, envy, embarrassment and all the common sentiments we humans also feel and can recognise in other humans. What a relief it was to have Frans de Waal publish his book on *Chimpanzee Politics* in 1982. Finally, there was confirmation of what other zookeepers and I saw daily: some animals plan and plot, they have relationships and they certainly have a wide range of feelings.

Thanks to Frans de Waal and fellow researchers it now seems that science has accepted what many zookeepers and animal carers have long known.

Animals are like us in more ways than we have given them credit for.

The closer we are to the species genetically, the more likely it is we can identify the feelings we see in those animals. So for us, it is naturally easier to understand the sentiments expressed by the great apes, such as orangutans, gorillas, Bonobos or Chimpanzees. However, I have also known birds with a sense of humour, bats with jealousy issues and shy penguins.

In groups of social animals there is usually a hierarchy, with one animal or a pair leading the group. As an animal carer there is usually little you can do when the animals in your care undergo a change of leadership. Animals will follow their own instincts and choose or support the leader they want. Leadership changes can be violent and quite harmful to the leader being overthrown. Observing this at close quarters over many years led me to think a lot about leadership, its 'hows' and 'whys'. At the same time, the more I read and understood about evolutionary biology, the

more I appreciated our similarities with other species. Rather than focusing on the differences as society often does, I saw the parallels. We are a species that prefers to think itself superior to all others and we're keen to emphasise difference rather than acknowledge resemblance. As an animal carer for several decades I can't help but see our species reflected in the animals I care for and observe. Boy teenagers pushing and jostling each other at the corner of the shopping centre remind me of young and boisterous bull elephants at an African waterhole, their bravado and mock fighting exploring 'who is the toughest?'. The way teenage girls walk past those same boys in twos or threes, looking but not looking, is reminiscent of female grouse nonchalantly inspecting the male birds on their display ground.

From an evolutionary point of view, we are related equally to the Chimpanzee and the Bonobo, two very different great apes although similar in appearance. While chimps are highly excitable, slightly aggressive, posturing beings, the Bonobo are known to be more peace-loving and to resolve conflict with sex rather than violence. We share numerous biological, emotional and behavioural traits with both of these species. In addition, Chimpanzees have male-dominated societies while Bonobos are female-led. Female leaders are not as common in the animal world, but where they do occur it is fascinating to observe the difference from the male model. Males will often have physical leadership battles for dominance while the female alpha position is often gained through respect for experience and knowledge. The case for aggressive human conduct being a result of our 'animal nature' is clearly simplistic,

as this example shows. There is so much more we can learn about our own natures and leadership styles by delving deeper into the complexities of animal societies.

In this book I have focused on the positive leadership conduct displayed in the animal kingdom; the behaviours that offer insights into how humans can be more effective leaders. Wild animals have significant expectations of their leaders. They want to trust them. They want to be protected by them, and they want their leaders to make decisions for the greater good of the community. Incompetent or vicious leaders will be deposed by their animal followers as soon as there is a viable alternative. The nastier an animal leader is, the more violent their defeat will be. This book delves into the intriguing lives of animals, their societies and what we can learn about the best examples of their wild leadership styles.

CHAPTER 1

THE HUMAN ANIMAL

‘There is no fundamental difference between man and the higher mammals in their mental faculties... The difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind.’

CHARLES DARWIN

We are human. We are also apes. More precisely, we are social apes. The fact that science puts us squarely in the ‘social’ basket is very relevant to leadership. Once animals or people get together to live in communities, leaders and followers emerge. Leadership is needed to defend territory and clan, to keep the peace and to arbitrate in disputes, to share resources (somewhat) fairly and to console the bereaved. Once communities form, there must be rules about how to live together. We need strategies about how to avoid and minimise internal conflict because we may need to fight the

enemy together tomorrow or hunt communally to feed the clan. Leaders implement strategies and enforce their society's rules. Leadership and followership are ancient features in human and many other mammalian societies.

This chapter explores our similarities with wild animals, the genes we share and emotions we feel. It looks at why we are social and how being social shapes our society and the expectations we have of our leaders. Human conduct is closely correlated with the behaviours of wild animals. We also share many leadership qualities and follower expectations with animals. Human sociality shares many similarities with the African great apes; particularly gorillas, Chimpanzees and Bonobos. This chapter also touches upon the shared evolutionary heritage between wild mammals and humans. Why might this heritage be informative when we think about natural leadership styles? Our evolutionary heritage and genetic relationship with wild animals give a context from which to explore the leadership qualities of our wilder relatives.

Many people are interested in their family history. It can give a window into where particular talents, likes or dislikes may have been inherited. For example, your great-great-great-grandmother was an accomplished painter and, lo and behold, you are an enthusiastic contributor to local art shows. Stronger evidence for genetic determination of human personalities is provided by the many cases of identical twins separated soon after birth who then mature with astonishingly similar jobs and interests, even the choice of spouses. We inherit traits from our ancestors. Not only from our immediate ones like great-great-great-grandparents but also from ancient wild predecessors that lived millions of years ago.

Who are our relatives from way, way back? Modern humans, *Homo sapiens*, have a very close relationship to the other primates, in particular the apes. We share a common forebear with Chimpanzees, Bonobos and gorillas, who lived between eight and six million years ago. Chimpanzees and Bonobos, our cousin species in the animal kingdom, share nearly 99 per cent of our DNA.

Many of us read crime fiction books or watch crime shows on TV. In a relatively short time we've discovered how important DNA can be in solving crimes and scientific problems. We also know that the science of DNA (molecular genetics) can solve questions we could not have even asked previously.

For example: the DNA difference between Chimpanzees and gorillas, the other great ape in Africa, is about 1.6 per cent. Making Chimpanzees more closely related to *us* than they are to gorillas. Interestingly, Chimpanzees, Bonobos *and* humans all show the same 1.6 per cent DNA difference from gorillas. More of a difference yet again: just over 3 per cent distinguishes us *and* the other African apes from the orangutans. All the great apes *and* humans differ from the Rhesus Macaque, a small monkey from Asia, by about seven per cent in their DNA. This illustrates just how close *our* relationship is to Chimpanzees and Bonobos.

What sets us apart from other species? Is it a greater difference than what separates all species from the next? Do these often-minor differences justify our right to dominate them, increasingly to the point of exterminating them? The focus of these investigations is often about identifying what sets us apart from other animals rather than similarities. Of course there are differences. Most of

us are not covered in a coat of black hair and humans evolved the ability to walk on two legs more than four million years ago. The great apes are known as 'quadrupedal' (four-footed) although some are capable of walking on two legs for short periods. Walking upright, bipedalism, is usually considered a distinctly human trait.

Other significant human features are a large brain and the ability to make and use tools. In 1960, the now-renowned primate researcher Jane Goodall came across a wild chimp she named 'David Greybeard,' who seemed to strip the leaves from a twig which he then inserted into a termite mound. The termites bit into the twig and, presto, David had modified a twig to 'fish' for termites. This observation made the world aware, for the first time, that species other than humans made and used tools. Although tool-making was once considered a specific human development, we now know that many animals such as primates, sea otters and crows are also capable of doing so. Species demonstrating the ability to make tools are now discovered quite regularly. Every year the list of animal tool makers grows longer. Many of the traits previously seen as specifically human and setting us apart from the animal world have later been discovered not to be the sole domain of humans.

Language in humans is another trait that sets us apart from the other great apes. Many primate observers now agree that body language, gestures and vocalisations in great ape species allow for sophisticated communication.

Darwin's theory of evolution and the much more recent advances in molecular genetics allow us to think more scientifically about the age-old philosophical question of who we are and our origins,

offering us a better understanding of our ancient selves. Studies of wild animals and those in human care have contributed to what we know about animal behaviour. We look at our primate cousins and see what drives and motivates them. Some of these motivations are the same or at least similar to ours and many of our reactions to circumstances are also hardwired and instinctive. This knowledge can help us chart the origins of leadership traits, helping us become better leaders.

KNOWING OUR ANCIENT, WILD SELVES

Although most people are well aware of human history it may be useful to do a recap. This can lead to a greater understanding of how our current leadership behaviour correlates with that of our evolutionary ancestors and primate cousins. Evolution is the lengthy process of change by which people originated from ape-like forebears. Robin Dunbar, in his book *Grooming, Gossip and the Evolutionary Language*, defines evolution as 'the outcome of a successful solution to the problem'. Our existence too is the result of our predecessors successfully having solved problems of survival and adaptations to challenging circumstances. They survived at least long enough to have babies and pass on their genes.

Charles Darwin hypothesised that our ancestors left the forests in Africa in favour of the open plains. Along the way our early relatives developed the ability to walk on two legs, a more suitable way of moving about on the savanna. A study by Michael Sockol found that walking upright could have been more energy efficient than quadrupedal knuckle-walking for early ape-like humans.

Exactly why and when early humans stood upright and started moving around on two feet is still being speculated.

Once we did not need arms and hands for locomotion, we could use them for other things, such as holding weapons, making and using tools. This in turn may have encouraged the growth of a bigger, better brain, although a more recent theory is that increased socialising required a larger brain.

The human brain is unusually large. Our brains have tripled in size from early human ancestors to modern humans and are almost six times larger than expected for a placental mammal of our size.

On the plains, our forebears changed their diet which had been largely vegetarian to include more meat. Although some meat is eaten by other primates, the early human practice of hunting and gathering is not known in other primate groups. Our evolution from mostly vegetarians to carnivorous predators is therefore quite unique in the primate world. Desmond Morris in *The Naked Ape* illustrates the way our forebear transformed:

‘His whole body, his way of life, was geared to a forest existence, and then suddenly (suddenly in evolutionary terms) he was jettisoned into a world where he could survive only if he began to live like a brainy, weapon-toting wolf.’

In evolutionary terms, these changes in locomotion or diet due to environmental pressures can be rapid – sometimes so fast that the necessary changes to the physical body are not quite complete. I looked after a wide range of species throughout my career and one that stands out as being an example of a species caught halfway

through a big evolutionary change is the Binturong (a medium-sized mammal). In contrast to humans, their diet changed from mostly meat to almost vegetarian. Binturongs are taxonomically a carnivore with a carnivore gut and dentition but are now mostly a vegetarian in practice. As a zookeeper you clearly see the results of that: loads of fruit goes into the binturongs and most of it comes out again on the other side, looking fairly similar to when it went in, poorly digested in its short, meat-processing gut. Binturongs like all organisms are in a process of change in response to an environmental pressure to do so.

Our human predecessors took to hunting for meat on the open plains with gusto. They now had their hands free to carry weapons. The larger brain facilitated the making and use of tools and our communication skills helped us to hunt cooperatively. At this time there were some very accomplished hunters out there on the plains of Africa, already filling this ecological niche. Lions, African Wild Dogs, Cheetahs and hyenas for example. These typical carnivore species were eminently better designed for the job, with superior hearing and smell. On top of that these carnivore species had an enhanced physical design for sprinting and long distance running. Humans at this point have *only just* managed to walk upright.

When it came to the killing of their prey, our forebears did not have the teeth or claws that the original African hunting species had either. How did we compete with these talented hunters? We made tools and weapons that replaced the need for teeth and claws – knives, spearheads and poisoned arrows. Primates, us included, do not tend to have a great sense of smell but our vision is quite good, which is a useful attribute for a hunting lifestyle.

Our progress from a forest-dwelling primate to a hunter-gatherer is a long one – an evolutionary path for which we did not seem to be very well designed in terms of speed, hearing, smell or teeth. It seems though that our brain, not our body, was a determining factor in our success. Our lifestyle changes from a forest-dwelling, fruit-eating primate to a socially hunting ape had major implications for communication and cooperation with group members. This increased need for communication meant we had to enhance our vocal skills and like any other ape, we also kept our old skills of reading body language, facial expressions and gestures.

We read the faces of others and get immediate feedback on how our words or actions are perceived. Chimps and Bonobos do the same. Their facial expressions have been studied in much detail and these expressions make it very clear to other chimps what they are thinking. From only a quick glance at a face, humans are also able to form a judgement – attractive or trustworthy for example. For a social animal it is crucial to assess others quickly. Are they dangerous or friendly? Life itself may depend on that decision.

Chimpanzees also use vocalisations to communicate, mostly described as hoots, grunts, barks, screams and whimpers. Bonobos, too, make many sounds from food calls to long-distance travel peeps, anger and threat calls and a distinct laugh when they play or are tickled. As a communal hunter, we evolved even more vocalisations and are now the most vocal of all the apes. Our language skill is one thing that does *appear* to be unmatched in the animal world.

WHY SOME SPECIES ARE SOCIAL AND OTHERS ARE NOT

Sociality defines us as a species. Sociality is why we need leadership. How wild animals ‘make a living’ in the wild is diverse. That’s what evolution is all about – filling a niche in the ecosystem that can be exploited to ensure survival. Whether an animal species is social or not depends on many things. For example, if the food a species depends on is mostly sparse or far apart there may be a tendency for the species to be solitary. Most cat species are solitary with the notable exception of the lion. If food is abundant and plentiful the animal is more likely to be more social. Many species in dense forest are inclined to being solitary. Species are social so they can warn and defend each other against predators.

The great majority of primate species are social. An exception is the orangutan, another ape closely related to us, with a DNA difference of only 3 per cent. Orangutans feed high in the canopy, where food occurs in small quantities which frequently cannot feed more than one orangutan. This compels orangutans to remain mostly alone and limit their social interactions. Orangutans in human care will share a space with another orangutan, but in my experience this is often done so reluctantly once they have grown to adulthood.

Orangs are known by zookeepers around the world as the deep thinkers amongst the apes. My former colleague, Leif Cocks, founder of The Orangutan Project, cites a well-known saying among zookeepers: ‘Give a screwdriver to a chimpanzee and it will throw it at another chimpanzee. Give a screwdriver to a gorilla and it will use it to scratch itself. But give a screwdriver to an orangutan and it will use it to undo the lock.’