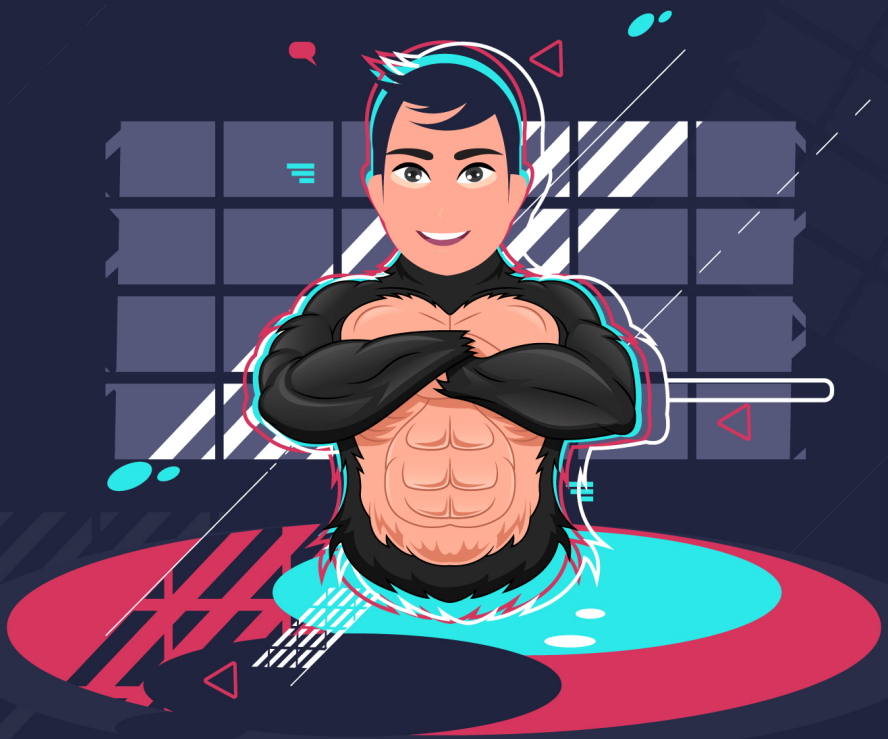
SUMMARY

OUR INNER APE

FRANS DE WAAL



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Summary of ”Our Inner Ape” by Frans de Waal

Written by Alyssa Burnette

If you’ve ever wanted to unlock the moral, sexual, and evolutionary origins of your inner ape, leading primatologist Frans de Waal’s analysis can take you on a revolutionary journey.

Introduction

We're all pretty familiar with Charles Darwin's theory of evolution. We know, for example, that in 1859, his Origin of the Species asserted that God did not create man and man's morality, but rather that all species of life had evolved over the course of millennia. During this process, he affirmed that genetic variations which contributed to the preservation of life survived while those which were not beneficial disappeared. Konrad Lorenz built on this argument in his 1963 text, On Aggression, in which he argued that evolution's purpose for each individual was not to preserve one's own life but rather to reproduce and pass on one's genes. This, he suggested, is where aggressive traits come in: for the moments when it's helpful to dominate others-- whether they're members of your own species or otherwise-- for the sake of passing on your genes.

Richard Dawkins concurred in 1975 and took this line of thought one step further with his concept of the "selfish" gene. Dawkins contended that the individual person is more or less irrelevant; rather, it's the individual gene which seeks to pass on copies of itself that matters and drives our actions. Operating on this assumption, Dawkins posited that the gene is selfish because it only interacts with others when such interaction would further its agenda or when it benefits those who carry the same genes, like close relatives. Our only redeeming quality in this process is our intellect or cerebral cortex, that ability to think through our decisions and ponder their moral implications is differentiates humans from animals and drives our acts of selflessness.

And though these are considered the primary leading works on the relationship between evolution and human morality, since the 1980s, many scholars have produced new texts which contradict the theories of Darwin, Lorenz, and Dawkins. And as you'll see through the course of this summary, Frans de Waal's study of reconciliation mechanisms among primates is one such rebuttal.

Hippie Monkeys

If the bonobo species had a slogan, it would be “Make love, not war!” And although they’re often called “pygmy chimpanzees” because of their physical similarities to chimps, bonobos actually couldn’t be more different. For starters, they might be the same size, but they’re also more delicate, have smaller heads, and possess the ability to walk upright. But that’s not the most interesting thing about them. Their behavioral differences are the key feature which distinguish them from chimps and this was first discovered when an unsuspecting circus owner borrowed a male bonobo from another circus, hoping that he would breed with the troupe’s female chimpanzees. And although he got his wish, he also got a lot more than he bargained for; the children of this chimp-bonobo pairing almost seemed to be sex-crazed! Not only were they constantly having sex with each other, they did it in so many bizarre combinations and positions that they were actually deemed too lewd to be used as performers for children’s entertainment.

This behavior was also observed in the wild when some Japanese researchers traveled to the Congo to study bonobos and it revolutionized everything they’d previously thought about primates. Because after studying chimpanzees, gorillas, orangutans, and humans-- all of whom are pretty violent and all of whom commit rape-- the researchers had included that all primate species engage in these displays of violence. But watching the bonobos proved them wrong! Because instead of fighting each other to the death, the bonobos simply have a lot of (consensual) sex. They also noticed that female bonobos don’t experience discrimination or violence in the same way as females of other specis; rather, they take an active and respected role in running their communities!

They also learned that bonobos are pansexual, which in their case means that they frequently have sex with members of their own species as well as with the opposite. Their sex habits are also strongly grounded in consent, as researchers noticed that partners look at each other’s faces whilst having

sex in order to guage each other's reactions and respond accordingly. And perhaps even more intriguing is the fact that three out of four sexual encounters among bonobos have nothing to do with procreation. Instead, they engage in sex for fun, as a way of saying hello, and as a way of resolving conflicts-- among many other reasons!

Girl Power

Earlier, we mentioned that female bonobos are highly respected in their communities. But, as researchers discovered, their impact on other bonobos actually goes a lot deeper. Because although they are physically weaker than their male counterparts, field studies show that they're not simply prominent in bonobo society-- they're actually the dominant gender! This is because female bonobos seem to have a concept of female solidarity and stick together to protect their interests. And because the males of their species are less socially adept and have less of a sense of gendered loyalty, a group of females can often overpower a group of males in any given situation.

This is in direct contrast to the behavior exhibited by female chimpanzees and researchers posit that geography has a lot to do with this. Because chimps live in the northern forest area of the Congo, they're often forced to split up to forage for food. This means that they primarily hunt alone or while carrying their young and have fewer opportunities to form strong social ties with the other females of their species. This indicates that environment plays a stronger role in social bonding and the development of gender roles than researchers had previously assumed. And in each case, we can see from these findings that the dominant gender is not determined by physical strength but by the ability to connect with a group.

The Male Bonding Experience

While researching chimpanzees in the late 1980s, de Waal encountered a puzzling experience: just a few hours after a bloody fight between two chimpanzee males, the aggressors gave each other what appeared to be a very heartfelt hug in front of their entire group. This was puzzling to de Waal until further research showed him that, because male chimpanzees hunt in a group, group cohesion is of vital importance. This means that cooperation is imperative and it's in everyone's best interests to make up quickly and support each other. However, he also discovered that within this group, there are clear hierarchies.

The hierarchy centers around one alpha male whose leadership is respected by the entire group until one young male eventually stops taking orders. Something that seems to resemble an "election season" follows, as the new challenger seeks support among the other members. This behavior is evidenced by constant offers to groom other males, as grooming is an important social interaction for primates. Once the rival has enough support, a fight takes place and goes on for as long as it takes for one challenger to admit defeat. De Waal noted that in many species such as orangutans and gorillas, the loser is often killed or driven out of the group, but among chimpanzees, the rules are different. Instead, the rivals make up and the hierarchy is simply re-structured.

Nice Guys Finish Last

Although we most commonly associate that phrase with human males, it can be observed in the animal kingdom as well. In fact, de Waal's study of chimpanzees has confirmed that only the most powerful males are rewarded with sex. This is especially significant because chimpanzee females only give birth to one child per pregnancy-- cases of twins or triplets are almost unheard of-- and they breastfeed for four years. During those four years, they are unable to get pregnant again, which means that male chimps have a very small window for potential sexual activity. This also increases the competition surrounding eligible females.

But while the males compete to have sex, female chimpanzees engage in a very different competition of their own. While they don't have to compete for the possibility of sex or pregnancy, they are all fighting for survival, as resources are often so scarce as to prevent each mother from getting enough food for herself and her baby. For this reason, females are heavily invested in procreating with males whose genetics will create the strongest offspring and thus, those who are most likely to survive. That means that females are very eager to have sex with the alpha male, but they become a bit more selective about others in the group. Even when males distribute food from their hunts, a female is likely to be very reluctant to sleep with the hunters unless they get a sizable portion of the food. They are, however, a little more open-minded when it comes to members of the alpha male's inner circle, which means it's in the best interest of other males to ensure that they're well-connected socially.

The Physiology of Dominance

Because of humans' evolution from primates, we can draw a number of conclusions about our early ancestors' physiques by looking at the physical differences which can be found across the range of primate species. We can even narrow down these differences by gender. For example, male gorillas can weigh up to 661 lbs and they are three times heavier than the females of their species. By contrast, chimpanzee males are only a few centimeters bigger than their female counterparts, but they have a more significant muscle mass which causes them to weigh one and a half times more. Similarly, dominance functions differently in the lives and cultures of each species, with chimpanzee males being only slightly more dominant than the females and willing to concede defeat in a fight. The bonobos, however, are different, being only a bit larger and heavier than the females. And as we've seen in previous chapters, bonobo males are also slightly more subservient.

In light of this, we can infer a few things about the impact of dominance on evolution. For one, we can assume that although the male bonobos must have been more dominant at some point, a social shift must have occurred later which prompted them to become smaller. If, for example, they eventually felt less pressure to fight and compete with one another, large muscles and brute strength would have lost their evolutionary benefits and thus ceased to become dominant traits. This also helps us learn a bit about the role of dominance in our life expectancy, because it stands to reason that if you're constantly battling for dominance, you're more likely to die young.

Lions are a perfect-- and very drastic-- example of this because lionesses can live for up to thirty years, while the average male life expectancy is a mere seven. The statistics are similar for male chimpanzees and humans, both of whom are more prone to dying in fights or from the elevated cortisol levels caused by the constant stress of battling for dominance. However, because bonobo males approach life through a "make love, not war" worldview, their stress levels are significantly lower and they lead

longer, healthier lives, with their life expectancy matching that of their female counterparts. So, from this, we can infer that lowering our stress levels through a decrease in competition can extend our life expectancy!

We can also learn a bit about human evolution because, based on physical differences in humans' sizes, it seems apparent that men were the dominant gender at an early point in human evolution. We can infer this because the presence of a longer matriarchal phase in leadership would have created evolutionary developments similar to that of the bonobos.

Sperm Competition

We can also learn a great deal about evolution by studying testicle size and sperm competition among primates. For example, although male gorillas are massive, they have relatively small testicles. Even small differences in testicle sizes might engender a significant amount of competition between males, but because of the social hierarchy amongst gorillas, the alpha male exerts such power that he has no sperm competition; that is, no other males dare to take a chance with the females the alpha has selected for himself. By contrast, the testicles of a male chimpanzee are twice as big as those of even a silverback gorilla, the largest of the gorilla species. But where the silverback is the undisputed ruler of the gorillas, the head of a chimpanzee group is more like a chairman of a political party. Because although his sperm might have priority, he's still responsible for granting female access to the other males in his party and this can lead to a bit of competition.

Bonobo society, however, is free of competition. Because bonobos are pansexual and engaging in their own primate version of a sexual revolution, all male bonobos can have sex with all the females. The competition is thereby eliminated, occurring only within the female's reproductive organs as the strongest sperm races to her egg cells. Human society is therefore more comparable to the bonobos. Because we live in "multi-male societies" in which males and females have free access to one another, our sperm competition is also relatively low by comparison. Combined with the fact that women don't typically make a habit of procreating with multiple random partners, we can infer that humans have an evolutionary predilection for preferring stable partnerships and equal access to sex.

Marital Fidelity Prevents Infanticide

Twenty years ago, a study on lions in the wild observed something shocking: the day a new lion took control of his pride, he brutally slaughtered all the cubs in the pack in front of their mothers. This was baffling to researchers until they discovered that this was a strategic device to guarantee that the lionesses would be ready to mate with him more quickly. In fact, scientists even determined that the smell of the dead cubs' blood activated the mothers' ovulation cycles. Similar behaviors have since been observed in many other mammals and all varieties of primates, with the notable exception of bonobos. What makes the difference?

One distinguishing feature is the fact that, in all other species, female interests are pitted against those of the male. This puts all offspring in a precarious position because males are genetically motivated to eliminate the genes of their competitors. By contrast, females are motivated to preserve their own genes through the lives of their children, even at the risk of their male partnerships. This motivation is absent in bonobo society, however, and thus bonobos are the only species which does not commit infanticide. That's because their culture of free sex and minimized competition makes it evolutionarily pointless for males to kill offspring that might potentially be their own.

However, human women use the opposite strategy. Although their sexual playing field might be similar to that of the bonobos, they differ in that they attempt to form pair bonds with the fathers of their children rather than employing the bonobo strategy of allowing all available males to assume the child might be theirs. Ironically, however, they do not differ from bonobo females in their evolutionary instinct to continue having sex with other attractive partners, even though this actually contradicts pair bonding.

“Exclusively Human” Qualities Aren’t so Exclusive After All

Many characteristics such as a sense of fairness have often been wrongly attributed as being exclusive to humans and de Waal’s study of capuchin monkeys proved this. His discovery occurred during an experiment which involved teaching two monkeys to hand pebbles to a researcher through their cage. As a reward for successfully passing the pebble, each monkey received a slice of cucumber. However, after twenty-five successful attempts, de Waal switched it up a little by rewarding one monkey with a cucumber and another with an even tastier grape. The monkey that received a cucumber immediately noticed the difference and de Waal observed him carefully checking his pebble before handing it to the scientist, which indicated that he had a concept of earning a lesser reward in exchange for low-quality work.

But when he could find nothing wrong with his pebbles and the inequality in the reward system was repeated, de Waal noted that the monkey became agitated and refused to continue participating, even demonstrating anger by throwing his pebbles at the researcher. Through this experiment, de Waal learned that primates are motivated by something more than a simple sense of their own benefit. This was proved again when de Waal repeated the experiment with chimps and noticed that each of the chimps who were unfairly compensated declined to participate. He also discovered a new and interesting development when even the chimps who were rewarded with grapes began to reject their treats in solidarity with their friends who were treated unfairly. This indicated to de Waal that a collective sense of fairness appeared to be hardwired into their genetic makeup, much as we assume it is with humans.

The Universality of Empathy

The ability to understand and identify with someone else's feelings is another quality we've often attributed exclusively to humans. But in fact, many animals have also demonstrated significant capacities for empathy, and this is especially true with the bonobos who can actually imagine how others feel. For example, in an experiment in which a scientist blindfolded one chimp and hid some food from him while another watched, the chimpanzee who had watched demonstrated clear signs of expecting his companion to be confused about the location of the food.

Chimpanzees also possess the ability to distinguish their own consciousness from that of others and they have been proven to use this skill for altruistic purposes. For example, if some chimps are unable to climb out of a ditch, their friends above ground will throw down a rope or a branch and use their own strength to help them climb out. This indicates that they understand their companions are in a predicament and they must feel scared and want out. They are even able to put themselves in the shoes of other species and understand their experiences as evidenced by one case study with a bonobo female and a bird. When a bird flew into the glass of her enclosure, she attempted to help it up and encourage it to fly again. But when she saw that the bird was injured and couldn't fly, she cared for it until it was better. When the bird's wing had healed, she gently carried it to the top of a tree, tenderly spread its wings apart, and threw it into the sky, indicating that she understood the bird wanted to fly and that she had the power to help.

Cruelty To Strangers is Universal

Unfortunately, primates also share a number of negative characteristics which are not unique to humans. Renowned British primatologist Jane Goodall observed that chimpanzees even share our sense of xenophobia after witnessing an incident between rival groups of chimps. One night while patrolling the borders of their territory, a group of male chimps saw a male from the enemy group and dragged him into their territory before promptly beating him to death. This indicated to Goodall that xenophobia may be an intrinsic part of our evolutionary makeup; in short, we're hardwired to distrust strangers.

Fortunately, however, xenophobia can be offset through actively practicing empathy, as evidenced by the behavior of the bonobos. Although they may not trust strangers from other tribes any more than other primates, they always de-escalate the situation through sex. They may not be willing to share food with the outsiders or groom them but they do appear to recognize that they're all the same species and that excessive hostility is unwarranted. Their willingness to at least coexist with strangers suggests that there is hope for overcoming xenophobia in the animal kingdom as well as our own.

Morality Runs Deeper Than Rationality

As humans, we like to think of ourselves as rational beings whose decisions are based on reason and free will. But the truth is that instead of processing decisions in our cerebral cortex, the part of our brain that is active in contemplating moral dilemmas is actually located in a deeper region of our brain, one which we share with primates. This was proven during an experiment in which participants were confronted with two versions of the famous philosophical "Trolley Problem" while their brain activity was scanned. In one version, you're faced with the dilemma of being in a trolley without breaks which is speeding toward five rail workers. Your only options are to stay on your present course or divert the trolley onto another track, where you'll only kill one innocent rail worker.

The second version of this problem invites you to imagine that you're standing on a bridge, watching as a trolley speeds out of control. It's still about to hit five rail workers and you have the choice to push a very heavyset man down onto the tracks (because his weight would form a significant roadblock and prevent the trolley from hitting the five workers) or to simply watch and do nothing. Unarguably, either of these are very difficult dilemmas and each participant struggled greatly with their decision. But in the case of the first problem, 90% of participants showed activity only in their cerebral cortex-- the rational decision-making center of our brains-- and said they would throw the switch to kill one worker instead of five. However, when faced with the option of physically killing someone with their own two hands, very few participants were willing to do so and this decision triggered activity in a much deeper brain area.

This indicates that the moral prohibition of killing someone yourself-- as opposed to more indirect methods like flipping a switch-- is deeply rooted in our genetic makeup; we're hardwired to revile the idea. Therefore, we not only share some sense of morality with primates, but this impression of right and wrong actually runs so deep as to override our sense of "rational" morality.

Our Two Inner Apes

De Waal posits that all humans have two inner apes. The first is our "typical," competitive ape, the one which engages in evolutionarily beneficial acts like competition and aggression and whose motivations are self-serving. But we also have a "collaborative" ape which inspires us to connect with others. This ape possesses a strong sense of social instincts and a desire for empathy and fairness. And although these apes might often be in competition with one other, the good news is that evolution has not caused one inner ape to suppress the other. Instead, they evolve, becoming more complex and collaborative as our world and the dilemmas we are faced with change. While our instincts may be motivated by primal impulses, we can learn to override them and draw positive qualities from each of our inner apes which will benefit us in life.

Final Summary

Building on the concept of our two inner apes, it's important to understand that we cannot improve society or invest in a worldview which is predicated on changing our inner apes. Because although some social theories like communism posit that our competitive behaviors can be overcome, this assumption is evolutionary flawed. The more intelligent solution, therefore, is to acknowledge that the qualities which shape our inner apes will always be present and we can only achieve social change by using those qualities for good.

Because like all primates, humans are driven by a variety of motivations, some altruistic and some competitive. We are neither exclusively "good" nor "bad," but shaped by a combination of the two. And although we may be able to trace some of our behavior patterns back to chimpanzees and conclude that we're acting out of an inherited evolutionary pattern, that doesn't mean that we're genetically bound to follow that pattern without hope of change. As illustrated through the countless examples of primates we've seen throughout this book, humans have already evolved for the better and we can continue to do so. By using our advanced powers of knowledge and morality to analyze our inner apes, we can use our inherited evolutionary qualities for good.