The Pet Keeping Species

Ours is the only species to keep pets. Peter McAllister suggests that our animal friends have used our programmed responses to steal our hearts.

Modern science has not been kind to Homo sapiens sapiens. One by one, each ability we had thought to be uniquely human – tool-making, problem solving, language – has been found in species as far below us as the invertebrates. Even the humble octopus makes and uses tools. But there is one thing – a common human behaviour that does distinguish us from the common herd – pet keeping. Only we regularly live with, care for, and even clean up the poop of animals we don’t intend to eat.

Should we, then, admit defeat and re-classify ourselves as Homo domestica bestia alitura – the pet keeping species?

It is a pretty weird claim to fame scientifically speaking as it makes no evolutionary sense at all. Julius Caesar, centuries before Darwin, was the first to notice this. Why, he asked tartly, didn’t the foreign noblewomen he saw cooing over pet puppies and monkeys save their titbits and affections for the recipients nature intended – their children?

Darwin didn’t directly address the evolutionary puzzle of pet keeping, but he did wrestle unsuccessfully with the problem of altruism. Why, he wondered, would organisms engaged in the ruthless struggle for existence spare precious resources to help unrelated others?

Not even kin or group selection theories can help here: your Bichon Frise fur-baby might share your bed, your food, your walks and your car rides, but he or she definitely doesn’t share your selfish genes. So where could this emotional connection with animals come from? If the evidence of modern hunter-gatherers is anything to go by, it was there already with our hominin ancestors although it appears it hindered, rather than helped, their hunting lifestyle.

Present day tribal hunters sometimes feel so guilty about their murderous assaults on prey animals that they perform elaborate rituals of apology to them – rituals such as those of the Sumatran Mentawai who stroke the prey’s corpse with flowers to ask its forgiveness.

And you felt guilty about not buying that KrazyKitty playwheel!

The super-wealthy are so often first to open their homes and hearts to fluffy, furry visitors

The fact that human pet keeping so stubbornly defies evolutionary explanation means we often fall back on potential cultural answers instead. Human pet keeping is, we theorise, a quirk of aristocratic elites that only went mainstream when we all became rich enough, and bored enough, to maintain mini-menageries, suburban Raja style. And some evidence does support this. Pet numbers over the past 50 years, in the Western world at least, have grown so quickly in tandem with our rising affluence that our furry friends now outnumber their owners in some Western countries. And history is indeed littered with kings, nobles and other potentates who used their wealth to support bewildering menageries of pets. The late 17th century Shogun Tsunayoshi, for example, made his city of Edo stink by keeping 100,000 dogs there. The Chinese king of Chu, 2,000 years earlier, cut down an entire forest to find his missing pet gibbon. At least one Roman matron kept an genuine gold fish – a live turbot decked from head to tail in gold jewellery – and even the primmest of American presidents, Calvin Coolidge, packed the White House with geese, donkeys, wild bobcats and pet raccoons that his wife, Grace, took for walks on the White House lawn.

Yet the very fact that the super-wealthy are so often first to open their homes and hearts to fluffy, furry visitors, and that we plebs follow suit when we can afford to, may actually prove the opposite – that pet keeping is no upper-class foible, but instead a universal, instinctual human behaviour erupting whenever constraints (in this case economic ones) are lifted.

The evidence of modern hunter-gatherers is again suggestive. Explorers’ accounts show most tribal peoples did keep pets when they could, sometimes in numbers rivalling those of the most decadent European menageries. The native peoples of Ecuador, for example, treasured everything from birds, lizards, possums and monkeys to sloths, coatimundis and ocelots. Some North American native peoples’ ‘tastes were even more exotic, stretching to moose, bison and bear cubs, which their women breastfed. Not to be outdone, native men also coddled their pets – anthropologist E.B. Basso, for example, wrote that Brazilian Kalapalo men chewed their pet parrots’ food for them, and Carl Lumholtz reported that Queensland Aboriginal men not only kissed their pet dingoes but also picked and ate their fleas.

If there is a universal human instinct to love pets, however, it must have arisen early in our evolution

True, it is possible that these shared pet addictions, although practically universal, were culturally driven. But how then to explain Geronimo’s pet cat? The elderly Apache warrior adopted and doted on a tabby while imprisoned by the US government at Fort Sill. Yet Geronimo was born into a culture famous for encouraging its children to torture animals. What could have softened the grizzled old fighter’s heart if not an instinctual human propensity to love pets, released when those cultural constraints were lifted?

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gnarled mulga for acacia scrub – that this scene must have played out tens of thousands of times in our ancestors’ two million or so years on the African savannah. We know Homo ergaster and erectus ranged roughly as far as modern hunter-gatherers, and that their similar growth trajectories mean they would have had “kids at home” too. Why, then, wouldn’t they have raided the occasional Lycaon sekowei (Pleistocene ancestor of the African Painted Wild Dog) den and taken a cute and cuddly little piebald bundle back home for their own erectus tots?

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- the dog tearing disobediently off out of sight.

To say nothing of warthog piglets, sabre-tooth kittens, impala kids, or any of the multitude of potential pets out there on the African savannah.

One thing bothered me, however. Although Djalego had said the pups would be pets, were they perhaps really slated for another role – hunting? Dingoes are commonly assumed to be great aids to Aboriginal hunters; many proponents of the “animal connection” hypothesis believe wolves co-evolved with early hominins in the same role. Might Djalego have been actually intending to use the dingo pups for tracking prey with his kids’ fun being just a side benefit? He quickly disabused me of the notion, however. “Tingku bark too much, scare off that malu (kangaroo),” he said, miming a hunter missing his rifle shot.

Anthropologists’ accounts show his experience is universal. Hunts using dingos invariably end in farce – the dog tearing disobediently off out of sight to the tune of shouted curses from the hunters, only to emerge from the scrub hours later with a bloody muzzle to show it has hunted and eaten well, even if its owner hasn’t. Even the lovable, rolling half-breeds of Jigalong and other communities are useless: the only dogs Aboriginal people have ever successfully hunted with were purpose-bred domestic breeds, like the famous “kangaroo dogs”, bred from British deerhounds and greyhounds, used in colonial-era Tasmania.

This is also, incidentally, why the co-evolution hypothesis of wolf/human hunting collaboration is almost certainly wrong. For wolves are even wilder than the dingo. Given that no hunter-gatherer group in history has ever been found to use wolves or any other wild canid for hunting, it seems unlikely Homo habilis, ergaster or erectus did either – even for the scavenging that may have been their main subsistence.

**There are intriguing hints that chimps would join us in the cross species affection club if they could**

If they did pick up kits, pups, piglets or other assorted adorables, out there on the savannah, they did it for the same reason Djalego did: love.

The love of pets might indeed, to paraphrase Anatole France, have awakened the Homo erectus soul, but how, again, could we know it was there if it doesn’t show up in the archaeological record?

There is one way: look for analogues in animals close to our ancestors. We may be the pet keeping species but there are intriguing hints that chimps and bonobos would join us in the cross species affection club if they could. Two Swiss researchers in Tai National Park, Ivory Coast, saw four young chimps playing with an intensely alarmed young duiker, trying to give it piggyback rides – just like an infant chimp.

Primatologists in Central Democratic Republic of Congo saw even more elaborate behaviour.

In one four-week period, they saw two male bonobos in three separate incidents playing with infant monkeys of two unrelated species – Angolan colobus and Red-Tailed monkey. Again, the apes tried to piggy back their unwilling playmates, just like young bonobos, and when they didn’t co-operate, they groomed them. In other words they patted them.

Unfortunately, chimps and bonobos are far too wild and violent for this cross-species pet play to ever succeed: most of these proto-pets died from their “games” within the hour. Yet the apes clearly find their unfortunate playmates “cute” in just the same way we do our pets. Their behaviour is also obviously, in intent at least, a primitive attempt at pet keeping. It is affectionate, playful, and aimed at keeping the “pet” with its ape “owner”. But what motivates it? The clue lies in the chimps’ pseudo-parenting behaviours. They groomed their animal charges as if they were real ape babies, played with them like babies, and even tried to make them piggyback ride like real baby chimps and bonobos.

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The “cuteness” that makes a chimp or bonobo pick up and cherish (or attempt to, despite their klutzy violence) a non-related animal pet is apparently that pet’s ability to trigger parenting behaviours in its ape “owner”. This is clearly unwelcome and no evolutionary advantage at all to an Angolan colobus or duiker infant. It will, in fact, probably eliminate it from the gene pool in minutes. But what if a pet animal was able to make an “owner” pick it up who could carry it gently away, who would feed it titbits, and who would keep it warm (when it invented fire), and dress its fur with custom kitty-comb grooming gloves in front of the TV (when it invented those) too?

The fact that our pets make us love them by hijacking our parent/infant bond will be no shock to most proud “fur baby” owners. It is to any self-respecting Darwinian theorist, however. Why hadn’t natural selection weeded out this surprising, anti-evolutionary vulnerability?

There is one possible answer from zoology. Konrad Lorenz wrote extensively about fixed action patterns (FAPs) – instinctive behaviours in animal parents automatically triggered by actions of their young that Lorenz called releasers. Adult African painted dogs, for example, involuntarily regurgitate food (the FAP) when their pups lick their muzzles (the releaser). A newborn kitten’s first poop, similarly, prompts its mother to eat it (the faeces, that is, not the kitten). Some FAP releasers, however, are shared across species. One of the most important, according to Lorenz, is the suite of physical characteristics common to most mammal infants – large eyes, broad and vertically squashed faces, and reduced nose and jaw size. Lorenz called this set of releasers the baby schema. One glance from those impossibly big-eyed cuties, he said, was enough to ignite hormonally driven parenting FAPs in mammals as diverse as marmots and musk oxen.

Not to mention Homo domestica bestia alitura, the pet keeping species.

The baby schema evolved because in normal circumstances it works. Any big-eyed, short-faced fluff-ball a mammal parent runs into usually is indeed its offspring. If it’s not, other FAPs based on scent or behaviour commonly weed the impostor out. Yet as those Congolese bonobos show, every now and then, when species collide, the baby schema can make things get weird. It seems, for example, to trigger the parenting FAP in chimps and bonobos, at least occasionally, no matter what species it’s on. And intriguingly, even though apes can identify young who are not their own through smell (as can we)
even that doesn’t seem to stop them. They not only play with these cross-species pets, but also frequently adopt non-related chimp or bonobo infants – so strong is their baby schema FAP response.

**Baby faces similarly provoke an involuntary change in our voices.**

However cute some FAPs are, though, they also have a sinister side. Because they’re fixed and instinctual (meaning the animal can’t stop doing them, even if they’re compromised) FAPs are a prime target for parasites. Parenting FAPs, for example, are often exploited by brood parasites, who trick the host into raising the parasite’s young by hacking that host’s FAP’s releaser code. The classic examples are the cuckoos, who exploit the “worm dropping” FAP of their reef warbler and cowbird hosts – their compulsion to drop food into the nearest gullet when they see it gape and hear its owner cheep. When a cuckoo smuggles its egg into the host’s nest, of course, the cuckoo chick’s superb mimicry of the “gaping, cheeping” releaser allows it to divert a portion of those worms to itself.

We humans turn out to be every bit as prone to FAPs provoked by infant releasers (in our case the baby schema) as other animals. Just glancing at a human baby’s cute, big-eyed little face, for example, provokes immediate, involuntary activity in our *zygomaticus major* – our smiling muscle. The activity also gets more intense, not less, the longer we look. Baby faces similarly provoke an involuntary change in our voices. We start talking in high-pitched, phonically exaggerated “baby talk”.

Infant faces have also been shown to completely bypass our normal visual processing system and instead directly access the most basal reward regions of the brain: the cingulate cortex, basal ganglia and thalamus.

**Dogs out-baby real babies. They’re hyper-responsive to human gestures and expressions.**

To top it all off we’re also just as easily fooled by brood parasite impostors as those befuddled reed warblers. Studies show, for example, that exposure to the cute faces of our pets triggers parental FAP reactions in us indistinguishable from the authentic thing. (If anything, we’re even less discriminating since our cuteness sensor can even be stimulated by inanimate, baby-faced objects like car fronts). We’re not faking it, either: urinary tests show we get the same surge of bonding hormones, predominantly oxytocin, from patting pets that we do from touching human babies. That’s probably why around 83% of us, in one recent survey, confessed that we do secretly view our pets as actual children.

This is a remarkable feat of brood parasitism. How have our pets pulled it off? Their secret seems to lie in the ‘supernormal’ releasers they have evolved – FAP triggers so powerful they make a host prefer its brood parasite’s young to its own – to keep us in thrall. Dogs’ and cats’ faces, for example, do not grow out of the baby schema the way ours do; even old cats and dogs still look a little baby-like. They are, what’s more, becoming more so the longer they live with us. Dog’s snouts, for example, have been getting shorter, their skulls broader, and their eyes proportionally larger and more forward facing over the last 30,000 years – even before we created faux-baby breeds like Chihuahuas. Behaviourally, too, dogs out-baby real babies. They’re hyper-responsive to human gestures and expressions. Experiments show, for example, that they study human faces intently for problem solving hints, and understand pointing gestures better even than chimps. Crucially, they never stop doing so, while all human parents eventually face the trauma of becoming invisible to their kids. Exposed to supernormal stimuli like these, is it any wonder many of us report feeling more empathy for pets than for children, and that many married pet owners admit to secretly loving their pet more than their spouse?

So has human history since the Pleistocene possibly been nothing but a succession of pats along the road to our animal companions’ rise to the status of parasitic master race? Were we done for the moment that first *Homo habilis* or *erectine* stooped down to pluck that first cuddly fur ball from its nest, den or burrow? I say yes. For a while, a million and a half years or so, we were protected by our sparse population. We were still too few to form a real niche in which our proto-pets could diverge genetically from their wild relatives and evolve into obligate human parasites (species that can’t live without us). Instead they almost certainly did what captured full blood dingoes do today: spent their youth in camp before melting back into the wild as adults. Our real, headlong plunge came when we started living in semi-permanent settlements around 20,000 years ago. It was only then that the wolves and wildcats, which would become our dogs and cats, could settle down for their whole lives too and begin their evolution into the most successful love parasites the world has ever seen. And once they’d done that the rest, like us, was history.

This is Peter McAllister, last survivor of the planet of the pets, signing off.