

# **ISCP Thesis: Canine companions, the elevation of a species**

**By Sarah Beaurain**

## **Overview.**

There has been substantial research into how the domestic canine became distinct from the wolf, and how natural selection caused those canines who were tamer and less fearful of people to accept humans attracted by the easily obtainable food supplies associated with human refuse. (Coren, n.d.). The studies of neoteny and Paedomorphosis have explained the physical and behavioural changes associated with the self-selective breeding of these individuals. (Goldman, 2010). This essay covers the transition of the dog from its prehistoric ancestry, through the middle ages and Victorian Britain up to the present-day dog we recognise as our companion.

## **Introduction. Understanding the symbiosis between humans and canines**

To understand the origins of the dog, it is important to appreciate the origins of man. There is a symbiotic link between the two species that was critical in their evolution. Homo-sapiens is the sole surviving sub-species that evolved into humans. Around seven early human species evolved from hominids (great apes), all other sub-types became extinct including the Neanderthals which were larger and stronger than Homo-sapiens with larger brains. The Ice Age was a determining factor on which early humans would survive. The cooling climate reduced accessible vegetation and the quantities of large mammals available to hunt decreased. Early man had to change from a nomadic lifestyle, previously travelling to where the large game could be sought, to living in village settlements developing a type of early agriculture. (Adhikari, 2019)

It was this shift in human settlement that established the initial connection with wolves emerging in close vicinity of humans. Naturally they would be mortal foes, conflicts between man and wolf typically resulted in death and injury for either or both and naturally wolves stayed away from man. However, the Ice Age and lack of food resources combined with the refuse piles of human food waste proved to be tempting for some wolves, who began to scavenge on this easily available food. The canines that surrounded these early settlements acted as sentinels to ward off attack from other tribes and wolves. It was mutually beneficial for all concerned. The Homo-sapiens were more slightly built than the Neanderthals, having smaller heads and necks allowed space for the development of vocal cords combined with their flexible jaws and lips they developed the ability to communicate through sound and facial expressions. Early canines were exposed to the development of speech in humans, and this enabled dogs to achieve an exceptional ability to understand human communication. (Coren, 2009)

The benefits provided by having watchdogs and hunting companions allowed Homo-sapiens to outlast the Neanderthals. Archaeological scientists have found no canine remains around Neanderthal settlements. Co-evolution of the domestic dog and humans was mutually beneficial to both species and explains our ancient connection with dogs above other animals. (Coren, 2009)

There is plenty of evidence of dog ownership in classical history. Roman, Byzantine, Chinese, Ancient Greek and Egyptian literature and illustrations depict dogs that resemble some of the modern breeds we see today, such as Greyhounds and Mastiffs. Although unlikely to be directly linked to modern breeds, they confirm that ancient cultures valued dogs as companions. (Coren, 2009). The invention of more sophisticated weaponry, in addition to people hunting game for sport rather than necessity, allowed breeds of dog to develop which were specifically tailored to the terrain and the particular prey animal they sought. The invention of the dog collar occurred at this time, elaborate and decorative collars have been found as well as illustrations of dogs wearing collars to signify prestige and owned status. (Coren, 2009)



(Brewminate, 2018)

A floor mosaic from Pompeii depicting a guard dog wearing a collar, dated 1<sup>st</sup> century.

### **English Dogs in the Middle Ages**

Dogs were very popular in the middle ages, they were valuable hunting assistants, separate breeds with defined purposes were valued. Stag, fox, and deer hunting had become popular sports for the noble classes. Working dogs toiled alongside peasant workers, shepherds and rat-catchers, the original collies and terriers.



*The Bayeux tapestry dated 11<sup>th</sup> century depicts a royal hunting party with hunting dogs wearing collars. (Irish Archaeology, 2016)*

In the 12<sup>th</sup> century, 'The Bestiary' was printed. It was a scientific catalogue of known beasts (animals). It describes the dog: *There are numerous (sic) breeds of dogs. Some track down the wild creatures of the woods to catch them. Others guard the flocks of sheep vigilantly against infestations of wolves. Others, the house-dogs, look after the palisade of their masters, lest it should be robbed in the night by thieves, and these will stand up for their owners to the death. They gladly dash out hunting with Master, and will even guard his body when dead, and not leave it. In sum, it is a part of their nature that they cannot live without men.* (Salisbury, 2012)

The most prized quality in a medieval dog was loyalty, praising the loyalty and intelligence of his hounds 14<sup>th</sup> century hunter Gaston Comte De Fox wrote: *"I speak to my hounds as I would to a man... and they understand me and do as I wish better than any man of my household, but I do not think that any other man can make them do as I do."* (Collin, 2018)

Sighthounds were bred to chase hares for sport and later mechanical devices were built to enable the dog races to be set up anywhere and the prey was replaced by a machine-driven high-speed lure. In the 1500s Queen Elizabeth 1<sup>st</sup> set up coursing matches following in her father's footsteps. (Coren, 2009)



(Johankaell, 2015)

*A Renaissance painting of a medieval dog handler with a Lyemmer, a scent hound that was worked on a leash to search for prey.*

Medieval dog handlers were called *berners*, handlers using leashes, known as a *limer*, he was referred to as a *lymerer*. Dog handling was considered a craft as they memorised the dogs' names, characteristics and individual vocalisation. They could tell at a distance where each dog was, and whether they were lost or had caught the game. (Medieval dogs – Exploring the medieval hunt, 2015).

John Caius 1510-1573 was the first person to record names, natures and properties of the dogs that existed during the middle ages. Titled *De Canibus Britannicis*, he comprised an intriguing list and wrote comprehensive descriptions of dogs' appearances, hunting methods and their target prey animals. He categorised them as follows. (Caius, 1576).

### Hunting Types.

- Harriers, above ground rabbit hunting dogs.
- Terriers, below ground vermin hunters and game flushers.
- Bloodhounds, dogs which could track a wounded animal by following the scent of the blood.
- Gaze hounds, sighthound types targeted at fox and hare prey.
- Grehounds, the origin of the word greyhound is grishound, meaning ancient dog, they were the nobility of the sighthounds and mainly targeted deer.
- Lyemmer/Loranus, considering a lymerer was the old word for leash, this was a type of scent hound which was leashed and led the huntsman to the prey.
- Vertagus/ Tumbler, a sighthound with a particular ability to twist and turn in its pursuit of the prey to divert the animal from its lair and trap it by agility and the ability to turn rapidly, most likely similar to a Lurcher or Whippet.

- Canis Furax/ Stealer, a poacher's dog, known for its lack of vocalisation and ability to hunt in darkness, also known as a night curr.

(Curr is the old English word for mongrel)

- Index/Setter, typically a setter or pointer type which has the ability to freeze and signal where the prey is hiding.

- Spaniel types, for flushing game from the land, the Aquitaine is for flushing game from water, ducks, etc.

- Fisher dogs, these were able to hunt in water, their prey being water mammals such as beavers and otters. (Caius, 1576)

#### Gentle, comforter type dogs. (Lapdogs)

- The Gentle Spaniel, Comforter Dog. Described as "*pretty, proper and fine, sought for to satisfy the delicateness of dainty dames, instruments of folly*" These were lapdogs for ladies of nobility. The nearest modern equivalent is the Cavalier King Charles Spaniel. (Caius, 1576)

#### Farm Dogs.

- Shepherd's Dog. Primarily a sheepdog, a pastoral type that tended the flock and aided the shepherd in rounding up the flock. The precursor to the Border Collie.

- Mastiff. A heavily built thickset dog whose purpose was protection. The flock needed protection from wolves, for which a strong type would be needed. On the journey to and from market, valuable meat and money would need to be guarded from bandits and thieves. (Caius, 1576)

#### Curs/Mongrels.

These dogs were not particularly true to type or form, they were categorised more because of their role in society, the job they performed was not pertained or confined to dogs with specific attributes. These were mongrels with general purposes.

- Admonitor/Wapp. These were house-dogs, their purpose was to bark and warn off strangers and intruders. Wapp (yap)

- Saltator/Dancer. These dogs were entertainers, they performed tricks, wore costumes, they often accompanied minstrels and earned their keep by providing amusement.

- Turnspit Dogs/Vernepator Cur. Turnspit dogs were bred and kept as kitchen dogs. Running in a wheel connected by a drive belt to a spit containing meat, the spit was turning in front of the kitchen fire to cook the meat evenly. These dogs were valued kitchen workers, doing a menial task freeing up labourers for more essential tasks. (Caius, 1576)

In England, the dog population comprised of a narrow selection of dogs, which had a clear purpose. These remained much the same over the next few hundred years. In 1809 William Bingley compiled a publication named "*Memoirs of British Quadrupeds*", it was a compendium of notable animals including dogs. He listed and described 20 types commonly seen across Britain, some of which are recognisable today, but some have become extinct such

as the Wolf-dog as their target prey became extinct in Britain. Another type that disappeared was the Turnspit dog. (BINGLEY, 1809)



*Turnspit.*

*Pub. by W. Darton & J. Harvey, Sept. 1<sup>st</sup> 1808.*

<b>DOG TRIBE</b> .....	76
— <b>common</b> .....	79
— <b>Fox</b> .....	124
* — <b>Shepherd's</b> .....	91
* — <b>water</b> .....	94
* — <b>Spaniel</b> .....	76
* — <b>Setter</b> .....	99
* — <b>Pointer</b> .....	101
* — <b>Hound</b> .....	102
* — <b>Bloodhound</b> ...	107
* — <b>Irish Greyhound</b>	110
* — <b>Common Grey-</b>	
<b>hound</b> .....	111
* — <b>Mastiff</b> .....	115
* — <b>Bull-dog</b> .....	118
* — <b>Terrier</b> .....	119
* — <b>Lurcher</b> .....	122
* — <b>Turnspit</b> .....	123
* — <b>Greyhound Fox</b>	134
* — <b>Mastiff-fox</b> ....	ib.
* — <b>Cur-fox</b> .....	134
— <b>Great Water-Dog</b>	94
— <b>Lesser Water-Dog</b>	ib.
— <b>Wolf-Dog</b> .....	110

(BINGLEY, 1809)

### Turnspit Dogs.

In the 1500s turnspit dogs replaced small boys for turning rotisseries for cooking meat. They became an essential kitchen tool, referred to as Turnspete, cooking dog, dizzy dog and Vernepator Cur, (Latin for turning wheel). They were long-bodied with short, often crooked legs, they had heavy heads and drooping ears. They were strong and had stamina to run for hours inside a wheel, turning it to drive a belt which rotated the meat in front of an open fire. The wheel was mounted high on the wall away from the fire to prevent the dog from overheating. Turnspit dogs often worked in pairs and were swapped to allow rest. It is said that in order to keep them running, a hot coal was tossed into the wheel. They were unattractive and said to have a morose disposition. Undoubtedly because they led such mundane lives. On

Sundays, they were often taken to church for the purpose of being foot-warmers. Dogs ran in wheels to power varying machines such as butter churns, water pumps and washing machines, this led to a vast number of these dogs being employed in place of servants.

They were commonplace until around 1850 when the invention of machinery replaced them. It became a sign of poverty to own a Turnspit dog. They became extinct as a type very rapidly. Queen Victoria was said to have kept three retired Turnspit dogs as pets. The nearest modern equivalent is the Welsh Corgi. (Turnspit Dogs, 2014)

(Turnspit Dogs, 2014)

### **Recent Historical Considerations.**



The industrial revolution and the proliferation of the railway in Britain resulted in convenient travel across counties which revealed a regional difference in dogs' purposes and appearance. The age of exploration around the world began and exotic dog breeds from faraway lands were brought to England. For example, the Borzoi Ballet Company brought with them the exotic-looking Borzoi hound from Russia, sparking an influx of imported exotic dogs from distant shores. (Worboys , Strange and Pemberton, 2018)

The Victorian era saw a new interest and understanding of science and nature. They studied zoology and this era saw Darwin publish his theory of evolution and natural selection. Darwin argued that canine breeds resulted from variations and selection albeit of an artificial kind. (The unique diversity of man's best friend, 2011)

The 1835 Cruelty to Animals Act of Parliament outlawed blood sports such as bull and badger baiting and dog fighting. This left dog breeders with a surplus of puppies and gamblers were left with a vacuum for their betting habits and amusements. This circumstance gave rise to the idea of working-class dog competitions and beauty contests. Known as 'The Fancy' a group of dog enthusiasts began to form clubs and meet up for regular contests to determine who has the most aggressive looking dog or which dog's coat was the best colour and texture. They also ran ratting contests for terriers, the winner being the fastest and most prolific killer. (Worboys, Strange and Pemberton, 2018)

Alongside the dog enthusiasts of the lower-classes, a form of elitism occurred in the upper and middle-classes regarding the bloodlines of their shooting and hunting dogs. Comparable to the doctrine surrounding thoroughbred racehorses, it was desirable for dogs of a particular type to 'breed true', that is that when bred, they produced offspring of similar looks and abilities. This was particularly true of gentry who possessed kennelling to breed dogs bearing a familial name, such as foxhounds belonging to an estate. The dogs would be bred to achieve particular attributes such as size and speed, any need to alter the specification of the type was done by interbreeding with another variety of dog that possessed the desirable attribute. For example, if they needed to be faster and more agile, greyhounds may be bred into to the pack to achieve this goal. Records of bloodlines of particular varieties of dogs began to be kept, foxhounds and greyhounds being the first to have rudimentary pedigrees of lineage drawn up to record and prove the purity of breeding. (Worboys , Strange and Pemberton, 2018)

The first agricultural show to include a contest focused solely on conformation of sporting dogs such as pointers and setters was in Newcastle-upon-Tyne in June 1859. A year later the Birmingham Dog Show Society ran the first National Dog Show for all dog types, sporting and non-sporting, for which there were 267 entries with 42 classes. By the end of the 1860s the NDS was attracting over 700 entries, with over 20,000 paying visitors. This proved how fashionable and respectable dog showing and ownership was becoming. This increase in interest spurred a huge market and demand for varieties of dogs which could be entered and win classes at these shows, provoking an interest in breeding new varieties and reinventing dog types seen in ancient historical records. (*The surprising history of Victorian dog shows*, 2009)

John Henry Walsh was a surgeon and journalist who published several books on field sports in the mid-1800s. Notably his book *'The Dog in Health and Disease'* published in 1859 listed the prominent breeds of dog at the time.

CHAPTER I.

Wild and half-reclaimed Dogs, hunting in Packs. — The Dingo. — The Dhole. — The Pariah. — The Wild Dog of Africa. — The South-American Dog. — The North-American Dog. — Other wild Dogs . . . . . 14

CHAPTER II.

DOMESTICATED DOGS HUNTING CHIEFLY BY THE EYE, AND KILLING THEIR GAME FOR MAN'S USE.

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CHAPTER III.

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CHAPTER IV.

DOMESTICATED DOGS, FINDING GAME BY SCENT, BUT NOT KILLING IT, BEING CHIEFLY USED IN AID OF THE GUN.

The Spanish Pointer. — The Modern English Pointer. — The Portuguese Pointer. — The French Pointer. — The Dalmatian and Danish Dogs. — The English and Irish Setters. — The Russian Setter. — The Ordinary Field Spaniel, including the Springer (Clumber, Sussex, and Norfolk breeds), and the Cocker (Welsh and Devonshire). — The Water Spaniel (English and Irish) . . . . . 85

CHAPTER V.

PASTORAL DOGS, AND THOSE USED FOR THE PURPOSES OF DRAUGHT.

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CHAPTER VI.

WATCH DOGS, HOUSE DOGS, AND TOY DOGS.

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CHAPTER VII.

CROSSED BREEDS.

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Walsh records and describes 45/50 separate varieties of dog which existed in 1859. Half a century after Bingley's 1809 list, the amount of dog types/breeds has more than doubled. By 1900 there are 80 distinct breeds of dog. Entirely new breeds were created as breeders genetically modified pups by cross-breeding. Nowadays, according to the Federation Cynologique Internationale, the international top organisation for dog breeders, there are more than 400 recognised breeds of dogs. (*The curious origins of modern dog breeds, 2019*)

The UK Kennel Club was founded in 1873 by SE Shirley and twelve gentlemen who wished to have a consistent set of rules governing the popular activities of dog showing and field trials. The KC publishes all results of shows and trials since 1859. From 1880 they printed monthly registers of dogs' names and pedigrees. In 1891 the first Crufts Dog Show was held in London, initially a family-run event with approximately 40 breeds entered. When it was taken over by the KC in 1948 there were 84 breeds entered, double the initial event entries. Now attracting around 200 breeds annually, along with other dog sports and competitions such as agility, obedience and flyball. (History of the Kennel Club | About us | The Kennel Club, 2021) (The past history of Crufts dog show, 2021)

### **The History of Dog Training Methods**

Since the Victorian driven proliferation of dog breeds and more general-purpose ownership of dogs, there was a demand for dog training education. There were gun-dog trainers and other working dog professionals at the turn of the century, but general dog training and obedience advice was scarce. Improvements in book production and demand for information on the subject soon saw the beginning of publicly available self- education books about dog training.

In 1910. Colonel Konrad Most published the first 'how to train dogs' book. *Training Dogs: A Manual*, was published in Germany and translated into English. Most was an ex-military trainer of police dogs, as with many police and military dog trainers his methods would be considered heavy-handed today. However, Most did demonstrate an understanding of operant conditioning concepts before they had been officially founded by BF Skinner in the 1930s/40s. He described reinforcement as "that agreeable experience when the dog has performed a correct behaviour", he differentiated between primary and secondary reinforcers, which he referred to as inducements. He also suggested using a soft voice as modern trainers do today. (*The History of Dog Training, Influential Movement Creators in the Industry and the Impact of Training and Behaviour Adjustment – Academic Journal of Canine Science, 2018*)

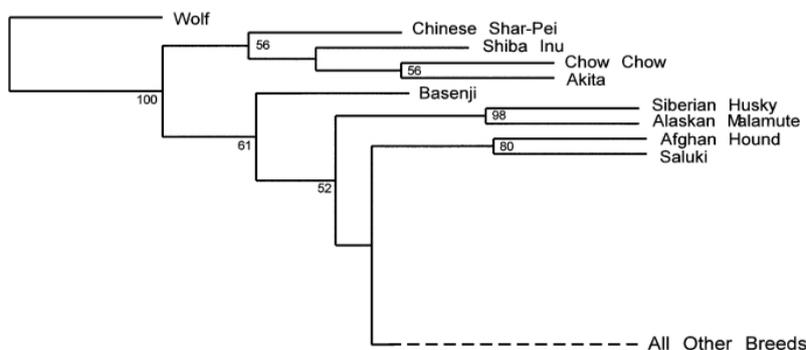
After Most's dog training book there was a succession of poorly conceived, mostly anecdotal dog training method books. They were based on positive and corporal punishment and negative reinforcement. From Koehler, Badcock to Woodhouse and Millan, all using aversive equipment and stimulus such as choke chain collars and rattle bottles. It wasn't until the 1980s/90s when the likes of Ian Dunbar and Karen Pryor began to promote the use of force free, positive, reward-based dog training, founded on Skinner's system of operant conditioning. Ultimately science being used as the foundation for dog training has led to a better all-round understanding of dog training, behaviour, causes and modification techniques,

is fairer for the dog and easier and safer for the owner to follow in order to create a lasting bond with their dog.

## **Conclusion.**

The difference between pre and post Victorian dog breeds is like comparing a rainbow spectrum to a modern paint sample colour chart. The former has distinct colours which vary in shade and hue and blending into each other, whereas a paint chart has an unlimited number of different colours, all distinct from one another in separate blocks. (Worboys, Strange and Pemberton, 2018)

Large databases, modern genetic analysis and genotyping has enabled investigation of genetic codes. This has revealed that the SINE genome (short interspersed nuclear elements) is responsible for creating the many variations seen in the domestic dog. SINE strands don't hold code for anything essential, they copy themselves throughout DNA. Repeated SINE strands in DNA are responsible for changes in coat colour and traits. The variability of the repetition of SINE strands reflects the variety and plasticity of dogs' DNA and explains why dogs hold the record for being the world's most diverse land mammal. (*The unique diversity of man's best friend*, 2011)



**Fig. 1** Neighbor-joining tree from 85 dog breeds showing the Ancient breed cluster. Ninety-six microsatellite markers were used to calculate the genetic distance between 85 breeds of dog. Using the gray wolf to root the tree, the nine breeds nearest the wolf formed

statistically significant branches. The other 76 breeds form a single node indicating shared ancestry and hybridization between the branches [figure originally published in Science (Parker et al. 2004)]

(Parker, 2012)

There is evidence that geographically isolated groups of dogs, such as the Chow Chow and Siberian Husky have more DNA in common with the Wolf due to isolation and the lack of human interference with their natural selection created by habitat and environment. All the other breeds indicate a shared ancestry and comparable amount of hybridization and unnatural selection generated by human means. (Parker, 2012)

My interest in the origins and varieties in dog breeds, ancient and modern stemmed from an article I found in my garden a year ago. Whilst digging footings for a patio close to my house I found an antique brass sportsman's button. It was an inch wide and clearly date-stamped on the back 1845. The front of the button depicts a dog with a fallen game bird at its feet. Being a Labrador enthusiast I sentimentally thought that the dog breed resembled a Labrador. I

researched the origins of the Labrador breed, which originated from a Canadian fisherman's dog, imported into Poole, Hampshire UK in the early 1800s by the Earl of Malmesbury, and bred by the Earl and Duke of Malmesbury. Described as "the best for any kind of shooting....generally black and no bigger than a pointer, very fine in legs, with short smooth hair....extremely quick running and swimming". (*Breed History: Where Did Labrador Retrievers Come From? - The Dog Blog, 2018*)

These buttons were the height of fashion for hunting sportsmen. I believe that the button I found is one of the earliest buttons depicting the Labrador Retriever being used for retrieving game, long before the breed was recognised by Kennel Club in 1903.



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