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Extract from:
The Police Dog: History, Breeds and Service

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Chapter 2

Nature and Nurture

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2 Nature and Nurture

Belgian Shepherd, Malinois Variety

The transition from the age of agriculture to the age of manufacturing, the Industrial Revolution, dramatically altered the relationship of the common man to the natural world, resulting in the loss of touch with age-old animal husbandry skills. Breeding and training of horses, dogs and other domestic animals was marginalized: became hobbies or professions for an ever-shrinking minority rather than the skills necessary for ordinary men in their day by day lives.

Practical knowledge of animal behavior had been fundamental from the beginning, for hunting down animals to eat, and avoiding being hunted down and eaten, were essential skill sets. The dawn of agriculture and the domestication of the dog, sheep and draft animals such as the oxen and later the horse meant that most men needed practical animal training, breeding and management skills in order to feed their family and provide security and shelter. Although the farmer and herdsman may have lacked a body of abstract theory and esoteric terminology, these people could and did breed, raise and train their horses, oxen and dogs as the foundation of their ongoing existence.

These skills were practical and heuristic, based on ways devised and evolved over time and passed from generation to generation, rather than the more abstract concepts of what we think of as science today. The development of modern science was pending the evolution of writing and mathematics; would unfold only slowly, for even the classic Greeks explained the world in terms of the four elements of earth, water, fire and air. This was little more than made up science in that it represented little real knowledge of today's chemistry, physics and biology; but as time went on men such as Newton, Einstein, Darwin, Skinner and Lorenz moved us forward to new levels of understanding. But the tentative speculation of these Greeks and other ancient peoples was not in vain; for it was from these beginnings that our current knowledge evolved. If we somehow manage to persist for another two millennia the knowledge of today will in its own turn likely seem quaint and primitive in light of new science.

On a theoretical or abstract level our understanding of human and animal behavior and cognitive function remains primitive; we train our animals using methods that gradually evolved over time because they work. But we cannot yet fully explain the underlying mechanisms of the process, the Schrodinger equation for the mind and brain remains to be formulated. We have only tentative understanding of the mechanisms by which the brain functions and our knowledge of the forces shaping human or canine emotion, cognitive function and social behavior remains primitive. In reality, the sciences of psychology and ethology are at a comparable level to the classic Greek understanding of chemistry and physics.

Sigmund Freud is regarded as the founder of psychology, but today most of his concepts have evolved and been discarded or substantially modified, to the point that the original theory is on the whole repudiated. This is of course how science works; it is often an ugly and disorganized process. But the problem is that outmoded – and often simply wrong – concepts carry on in the conventional wisdom and are used in making bad decisions of public policy and personal action. Much of this sort of thing, reliance on outmoded science, carries on in practical dog training, selection and breeding even today.

Meager as our theoretical understanding of cognition and behavior is, on a practical level the common man – until the advent of the automobile and tractor a century ago – needed a working knowledge of animal training and use in order to earn his living and support his family. The stockman, herdsman and farmer needed to be able to effectively breed, select and train the domesticated animals life depended upon. Until a brief century ago our very existence was dependent on this practical animal husbandry skill, this ability to work the horse, oxen and dog. Thus in a sense those of us struggling to sharpen our dog training skills today are simply striving to recover the day by day knowledge of our great grandfathers. While their book knowledge of breeding and training may have been small, the practical hands on knowledge was immense, was in fact the legacy of the advent of agriculture several thousand years ago.

What we do understand is that all creatures, including both men and dogs, are born with genetically predetermined behavioral propensities, produced by the evolutionary process, to make the actions and reactions necessary for survival inherent, preordained behavior patterns. The fact is that these instincts or drives evolved over hundreds of thousands of years of hunter-gatherer existence, and continue to present training opportunities as well as cause problems in modern industrial and agricultural society. The inborn potential for aggressive behavior in most creatures, and especially pronounced in predators such as men and dogs, is a fundamental fact of our lives, as explored by Konrad Lorenz, and others. In order to master dog training, it is necessary to understand these drives and instincts as well as possible, for the training process consists primarily of harnessing them to produce the desired response and behavior.

At first glance, it may seem that comparing man and dog is a stretch, that man, with his technical knowledge, ability to speak, read and write, is an entirely different sort of creature than the dog. But the commonality is compelling, for both man and the wolf evolved in small, cooperating social groups to live by hunting and scavenging, often among much larger and more powerful predators. This is in contrast to the big cats – the tigers, cheetahs and leopards – whose solitary hunting resulted in much less interactive social structures.[1] The social dynamics of the wolf pack and the primitive hunter-gather human band have much in common; but also important differences.

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[1] The lions, which generally form long term, structured social groups, are the obvious exception. The purpose of the lion pride is thought to have more to do with social structure maintenance than hunting; perhaps because most lions live in an open savanna environment rather than the jungle, forest or mountain areas typical of the other big cats.

As mentioned in previous chapters, even though it has become fashionable to think of dogs as directly domesticated wolves, this does not line up well with the current scientific view that man probably did not directly domesticate the wolf at all but rather an intermediate and now no longer existent population, probably scavengers, derived from the wolf. The evolutionary process operating on these intermediate populations was substantial, modifying the innate behavior characteristics as well as the physical attributes. Thus even though it is still common to explain many things in terms of wolf behavior and the pack structure, it is prudent to keep in the back of the mind that this is a substantial oversimplification. The wolf characteristics referred to may turn out to be more remote in time and evolutionary distance and thus less directly defining of canine behavior than we have tended to believe.

On the other hand, proto dogs likely did come into existence at the emergence of agricultural man, adapting a scavenger role on the outskirts of emerging human encampments or primitive villages. (Some researches argue for an earlier relationship, some thousands of years prior in the age of hunting and gathering, but details on how such a population could survive, especially as regards obtaining enough food, are scant.) Whether these constituted a separate species is something we can leave to the specialists to work out.

What is key for us to understand is that some sort of intermediate stage in all likelihood did exist, and that the wolf heritage, though perhaps much more remote, was a primary factor in our ability to in turn integrate these prototype dogs into our social structure and create the domesticated dog. We are able to train our dogs because they have evolved on the edge of and then within our social structures. The fact that this occurred in a very brief time span – a few thousand years – means that all of these fundamental canine attributes were latent in the wolf rather than caused by random genetic modification and selection. As the dog came into existence as a truly domestic animal in full partnership with mankind, he took on many roles, mostly relating to defense or protection and various aspects of animal husbandry or herding.

Art and Science

Since dogs do not talk, at least to most of us, our understanding of how they learn and why they respond and behave as they do remains in the realm of observation, speculation and conjecture. It is true that scientists such as Ivan Pavlov, B.F. Skinner and Konrad Lorenz have taken significant strides in creating a science of animal behavior, but to a certain extent training remains in the realm of experience and art rather than science. Since there are major differences among breeds and individual dogs in willingness and inclination to learn and perform, those seeking a dog naturally want to select one with a high likelihood of success. Several key questions emerge:

Why can dogs be trained at all?
How can the best dog for a particular function be selected?
What is the best training approach in a specific situation?

On a superficial level training can be thought of as a process of bringing a dog to the point where it will perform a task, such as working a track in a particular style or fetching an object and presenting it in a ritualistic way. In the process of creating a rote animal act for entertainment this is what it amounts to, but for those seeking useful service from the dog this trick for a treat approach is not and cannot be the essence of it, for you can teach parrots, pigs and even the big cats to execute rote stunts. The process of making the police dog or herding candidate ready for service is one of molding a relationship in which it can and will cooperate not simply in rote

tasks such as fetch but in situations where the dog must show initiative and take independent actions, such as a building search where the dog must guard if the found person passively stands his ground but engage if he flees or shows aggression. The police dog emerged from the herders, and the shepherd does not teach a young dog how to herd so much as he molds and directs the inborn instincts and natural propensities.

More particularly, since this is a book about police and protection dogs, the questions are why dogs are capable of human aggression and how to select and train dogs that can be effective, intimidating and useful yet still respond to and be under control of the handler. In his seminal popular book, *On Aggression*, Lorenz explores the complex evolutionary function of inter and intra species aggression and how it relates to territorial spacing, social order and breeding selection, and particularly how propensities and instincts can have extensions and consequences in venues beyond the original evolutionary purpose. (Lorenz, 1963) There is no chapter in the Lorenz book on teaching an obstinate dog to out, release the bite, but a broad understanding of the emerging knowledge of behavior can lend insight into the training approaches evolved in a heuristic way and handed down over generations. Lorenz accepted aggression as part of nature, and while deeply concerned about controlling its consequences in a modern world of war and conflict much more complex and hazardous than quarrels among hunting bands, he saw redirection, control and understanding of aggression as more realistic than trying to eliminate it.

In many important ways the key to selecting the right pup or older dog is the selection of the appropriate breed, that is, a Malinois or a German Shepherd for a police dog, a retriever such as the Labrador for duck hunting and one of the pointing breeds for upland game. This would perhaps seem obvious, for the original purpose of these breeds was supposed to be the breeding selection for the physical and moral attributes conducive to success in the particular line of work.

What is important but not at all obvious to the casual observer is that selecting a breed and randomly acquiring a pup is quite often an unproductive and ultimately frustrating experience, for the reality today is that most retrievers are not especially trainable for retrieving, many pointers do not instinctively point well and many German Shepherds falter at anything approaching real police work. The problem is that most puppies of these breeds are produced by those knowing or caring little about the work of the breed but rather are interested in accumulating the tin and plastic cups they hand out at the beauty shows, in being important in some way in an otherwise empty, dull and pathetic life or are simply lured by easy money. The consequence is that virtually all breeds with specific, serious originating purposes have today been split into diverging lines, virtually different breeds: the real workers and the popular AKC style companions and commodity dogs. The first indication as to the nature of a particular breeder is that virtually all serious working people, of any discipline, hold registry bodies such as the American Kennel Club in contempt.

An ongoing problem today is that sport systems, Schutzhund and French Ring in particular, are increasingly focused on things irrelevant to real police and protection applications, such as straight sits, artificial and exaggerated animation in heeling and whether during a search the dog looks into a blind experience has shown to be empty. Increasingly the rules force the judge to focus on trivialities rather than revealing the underlying functional nature of the dog. Close inspection shows that these things occur much more blatantly in systems under the thumb of conformation oriented organizations such as the FCI national European clubs, such as the SV. In general venues under the auspices of working breeders and trainers, such as KNPV and the NVBK, are much more practical, realistic and effective at producing truly useful dogs. This is a serious problem, for if the trial awards points for the wrong things, in the end the system, on the whole, will produce the wrong dogs.

So why, exactly, can you train a dog, induce him to obey? Is it because he loves you? Is it because he knows you will beat him if he does not? Is it because he hopes you will flip him a chunk of meat if he does?

Dogs adopt behavior patterns we condone and reinforce and respond to command because experience has created the expectation of desirable consequences for compliance and undesired experiences otherwise. These consequences must come to include the approval or disapproval of the handler as well as more tangible rewards or corrections, because in real service immediate response to the handler rather than the expectation of a physical reward is essential. The expectation of food or a thrown ball comes to be situation dependent, a conditioned response in a series of predictable exercises – useful in a contrived competition consisting of an invariant series of rote exercises but prone to failure in responding to asynchronous, unpredictable situations and commands under the stress of a tactical engagement.

In the harmonious relationship the sense of fondness and ease between man and dog are natural and desirable; these emotional and psychological bonds are in fact the basis for the utility of the canine. When this relationship is soundly established the dog is most content, and thus predictable and stable, in the world he understands how to control, where he can chose good things and avoid conflict through compliance. But there is nothing remarkable or unique about this: families, business operations and military units function best where there is established leadership, esprit de corps, and the tranquility that comes to the individual whose desirable actions lead to approval and predictable reward and undesirable actions cause discord, under his own choice and control.

Western culture, in particular the European, places enormous emphasis on the emotional bond between man and dog; as evidenced in innumerable stories, especially popular in children's literature, emphasizing and celebrating the proverbial love of a dog. Canine heroes on the movie screen or television perform amazing feats, come to the rescue of their master – typically a personable young girl or boy – on their own initiative with no evidence of training or a conditioned response. The one-man dog, emanating unconditional love, is the stuff of legend. The temptation is to conclude that love should be the foundation of service, that training is merely the process of forming and directing the natural emotional bond, that the natural and morally correct way of dog training is no force training through the guidance of the natural love of the dog. The dog is expected to obey you because he loves you. The problem is that the dog will naturally expect reciprocity, expect you to cater to his whims and desires, and avoid the expectation of undesirable responses, because you love him in return.

This is a false basis for serious training. Often the dog must respond to a command or situation in a way that is unnatural, that is food refusal or the call off in the long pursuit. Discipline, on occasion demanding sincere force, is necessary to produce a reliably trained dog for practical service as in police patrol or hunting. All training, including human education, is based on reward and punishment in balance, applied consistently according to the needs of the specific situation. Punishment is perhaps a harsh word, for many young men and woman understand that a lack of diligence in high school classes would lead to a life of menial, uninteresting work; and many dogs quickly learn – through effective training – that the correct response is also the most desirable. As an example, the release of the bite in the protection training is best taught from the beginning, where minimal correction will produce the release of the puppy tug. When the release command is delayed until late in the training, vigorous or even harsh corrections often become necessary. Good training strategy and practice will succeed with measured, humane corrections, but an element of compulsion is always necessary in serious dog training.

The emotional bond must be conceived and realized as the consequence of a good training regimen, not the basis of training. The spoiled dog without discipline will often exhibit affection and have a happy demeanor, and come to expect that the basis of love should be his doing what he pleases and you supplying the means. This is not dog training, it is handler training.

It is human nature to believe that one's dog loves them above all others, is the proverbial one-man dog, that there is a unique bond. The reality is that a confident, stable dog – the most useful kind – has the potential over time to transition to a new handler, just as many human beings can in time adapt to a new partner after the passing of a spouse. Dogs incapable of making such a transition tend to be flawed, seriously insecure.

The primary difference in the learning process between men and their dogs is that dogs live in a world of short term consequences and the human being from a very young age begins to be able to relate increasingly distant past incidents and their consequences to current behavior decisions. By the time the five year old begins school he is already much better at long term associations between actions and consequences than the family dog will ever be. In a good family situation you can sit down and explain behavior expectations to a five year old and in a meaningful way use reminders of prior experience to establish expected future behavior patterns. None of this is possible with a dog, everything must be taught without the use of language, a process that is awkward for the modern man where training a new family dog may be the first experience at dealing with animals, something that became routine experience for most children in a farm setting two hundred years ago. Much of the frustration, failure and abuse in dog training is rooted in unreasonable expectations on the part of the human that the dog should be able to make these longer term associations, and a tendency to inflict increasing punishment on a dog which cannot possibly have any idea of why he is being punished. Avoidance, fear and stress in the dog are the inevitable consequences.

Ethology

In the early twentieth century men such as Ivan Pavlov in Russia and Konrad Lorenz in Austria, famous for books such as *On Aggression,* pioneered the more formal study of animal behavior, beginning the difficult process of putting the age old arts of breeding and training on a more scientific basis. Pavlov, most famous for originating the concept of the conditioned response, was a physiologist primarily interested in the chemical and biological functions of life. His behavioral discoveries were made in a more or less incidental way, based on fortuitous behavior observations of animals undergoing experiments in his laboratory.

Lorenz spent a lifetime observing and interpreting animal behavior, as much as possible in a natural setting, with minimal outside influence and constraint. In doing so he played a key role in founding the science of ethology, defined as the study of animal behavioral patterns, particularly in their natural habitat, usually proposing evolutionary explanations. In addition to Lorenz, the discipline of ethology is associated with the name of his associate Dutch biologist Nikolaas Tinbergen, with whom he shared a Nobel prize in 1973. As the creator of popular books Lorenz has gained the lion's share of publicity and name recognition. Ethology has extended the concept of evolution – which had revolutionized our understanding of the physical form of plants and animals – to our understanding of the behavior, social mechanisms and organization of animal life, eventually lending insight into human social behavior. The ethologists based their concepts of human social and group behavior on the concept of this behavior as natural extensions of the evolutionary processes that created the behavior patterns of animals such as flocks of geese, the wolf pack and the territorial behavior of birds and animals.

For better or worse, the rise of ethology brought terms such as imprinting, operant conditioning, conditioned response and dominance into scientific usage, which has spilled out into the larger world, and in particular the discipline of canine training. Studies of the wolf pack social structure by men such as David Mechhave brought concepts such as dominance and the so-called alpha wolf into the common vernacular of dog training, sometimes with misunderstanding.

Much of the value of the work of people such as Dian Fossey and Jane Goodall, who studied Gorillas and Chimpanzees respectively in natural settings in Africa, is that to the maximum extent possible they were observers rather than intruders, in the fundamental spirit of the science of ethology. This has led to enormous advancement in our understanding, for Chimpanzee studies on animals living in a cage and interacting primarily with graduate students have serious limitations that tend to be glossed over. Observations of wolves living in confinement have similar limitations, and have created misleading impressions which have extended into the mythology of dog training.

Unfortunately, it seems that many of the concepts of wolf behavior, such as the alpha wolf, had originations in studies of confined wolves in grossly artificial and unnatural circumstances. The problem is that just throwing unrelated wolves into a pen does not create a pack and the group dynamics is not that of a naturally evolving family group in the wild. To their credit men such as Mech recognized and corrected this, but it has proven difficult to push the genie back into the bottle. The modern view of the wolf pack in the wild is that of a family group with cooperation in hunting and rearing the typically single yearly litter. Pack cohesion and cooperation springs from a natural social dynamic rather than a "leader of the pack" inflicting a thrashing on lower ranking members from time to time to remind them who is boss. (Mech, The Wolf: Ecology and Behavior of an Endangered Species, 1970)

Dog training for police service was well advanced when the field of ethology began to emerge, and the reaction of dog trainers has varied. Many trainers have benefited by incorporating this new understanding into ongoing programs, but some, aspiring to recognition as dog-training experts, picked up the vocabulary and began to style themselves as authorities, sometimes to the extent of giving seminars and writing articles. But an elaborate vocabulary and a condescending manner without hands on success is in the long term fatal to credibility, and can create confusion in the minds of beginning trainers. The beginner is well advised to focus on the teaching of those with practical success, and incorporate more advanced and esoteric concepts as their knowledge, perception and confidence increase. The difficulty with this advice is of course that the beginner can hardly be expected to find and recognize "practical success." Getting started in dog training unfortunately involves some trial and error in identifying good teachers and mentors because most of those involved are salesmen on one level or another as well as trainers, seeking a following for success in business or advancement of personal reputation and status.

On the other hand it is a serious mistake to ignore developments in science and mathematics when they are not obviously practical. I recall as an engineering student regarding the theory of prime numbers as something of theoretical interest only, of no use whatsoever in what I thought of at the time as the real world. Fortunately, people in this instance more clever and wise than I went on to use prime number theory as the foundation of the security and encryption systems that are now the basis of secure internet communication and commerce, of a new commercial world order. All fundamental scientific knowledge expands the human potential, is important and valuable even when there is a lapse of time before practical applications evolve and are proven.

Reading the popular books by Lorenz such as *King Solomon's Ring*, *Man Meets Dog* and *On Aggression* is not likely to reveal a quick and easy solution to the

problem of convincing a dog to release the grip on the protection sleeve, but the insight gained might perhaps help a person to grow as a trainer and become better able to devise training solutions on the basis of fact rather than myth, certainly something more valuable than a trick to solve an immediate problem.

Ethology is not a monolithic body of knowledge with universally accepted principles, as a quick look at a list of well-known figures associated with the field will reveal, which includes: Raymond Coppinger, Richard Dawkins, Dian Fossey, Jane Goodall, Julian Huxley, Konrad Lorenz, Desmond Morris and B. F. Skinner. Rather it is evolving and changing; the books David Mech writes on the wolf in more recent years to some extent modify and extend his earlier work, which is how science is supposed to work.

Coppinger is a particularly credible and worthwhile source, for he spent many years training and competing racing sled dogs and then years in the field working with livestock guarding dog. Dirty hands, or hands that have been dirty, may not be fashionable in academic circles, but when seeking out wisdom and guidance for dog training they are every bit as essential as a sharp and agile mind.

The dog trainer should be open to new knowledge and concepts, but not quick to adapt the latest fad; respect both the accomplishments of the practical trainer who can win a major championship or consistently produce high quality police dogs and the scientist, perhaps oblivious to the practicalities of animal training, but making important and useful discoveries leading to better understanding of underlying principles. The cabinet maker of today often has enormous practical skill learned as an apprentice of an older master, but that does not mean that men of science – who could not put up a straight shelf in the kitchen for their wife – are not part of the process, for were it not for discoveries in chemistry, metallurgy and mechanics leading to novel adhesives, carbide tipped cutting tools and high speed steels the advanced techniques of the modern cabinet maker today would never have come into existence.

Thus, to summarize, canine ethology or psychology as a body of abstract knowledge has produced substantial advancement in our understanding of animal behavior, but is still at a relatively immature state. Academics such as the Coppingers, greatly aided by personal hands on training experience, are going beyond abstract observation and theorizing to make enormously interesting and useful advances in canine behavior and training. Dog breeding, selection and training still is and should be passed from generation to generation as practical or heuristic skill and knowledge, but progress comes from incorporating new insights and knowledge, as proven in practical training, from the emerging science of ethology and other academic research.

Terminology

Where the Greeks spoke of earth, wind and fire the canine world speaks of drives and instincts such as prey and defense, as well as other attributes such as trainability, aggression and sharpness. While these terms serve the ordinary purposes of education and discussion reasonably well, defining and explaining them precisely, devoid of subtle contradiction, is surprisingly elusive.

Dog training is even today much more art, based on heuristics, than science and has evolved an elaborate terminology used as often to paper over mystery and confusion as to express objective knowledge. But unless one chooses to start over at the beginning and attempt to rediscover the practical knowledge developed over the many centuries of domestication it is necessary to deal with the existing terminology, flawed as it may be, in order to benefit from the accumulated knowledge. In the era when most men learned to breed, train and manage their farm animals working

alongside fathers, grandfathers and uncles terminology and written knowledge was secondary, but today many of us take up dog training or horsemanship devoid of the knowledge and perspective once common to most ten year old boys, making us much more dependent on written and verbal instruction.

Scientists and medical professionals have always had a certain propensity to create elaborate terminology as a cover for the fact that they are in fundamental ways as confused and uncertain as the rest of us. By adapting a mildly condescending attitude to the layman and parading the esoteric vocabulary they are often given credit for much more real understanding than they actually have, which is exactly the point. In a similar way, the armchair canine experts, equipped with an array of buzzwords, can create the facade of knowledge far beyond any real ability to deal with actual dogs. The advent of the internet has taken this tendency to pretend knowledge to an entirely new level.

Over millions of years the evolutionary process has brought forth powerful inborn desires and natural propensities to hold and protect territory, enforce social structure and hunt down prey animals as a source of sustenance. These primitive inborn tendencies, created by nature to provide food and social stability to the predator population, have come to be referred to as instincts or drives. Dog training is largely a matter of understanding, often more on a heuristic or practical level than theoretically, and harnessing these drives in order to produce individual dogs with desired, useful trained behavior patterns and responses.

The intrinsic nature of these behavior mechanisms is the subject of ongoing scientific debate and investigation and no two sources are likely to agree entirely on all of the details. Many things, such as fear of snakes or heights, are believed to be inborn, while others are learned from parents, siblings or others at very early ages. But even if one were to understand the operational principles perfectly, the tremendous variation among individuals would still make training difficult and a matter of experience and capability gradually accumulated in a heuristic way.

Serious dog training discussions thus feature terms such as prey drive and defensive instinct; which tend to be casually bandied about, used to explain every behavior incident and to substantiate any and every point of view. The novice sometimes picks up on this, acquires a few buzzwords and soon comes to think of himself as ready to enter the discussion on an equal footing with the experienced trainer, especially as an anonymous internet expert. Indeed, a line of patter full of references to the social structure of the wolf pack and terms such as prey or defense and an occasional comment about a sharp dog can make one a player in many internet discussions with very little real experience or knowledge to back it up. This can have the effect of inhibiting further progress in understanding and in training, as a litany of buzzwords takes the place of real knowledge, gained through work and experience.

What, exactly, is prey drive or the defensive instinct? The answer, disconcerting as it may be, is the same as the one Alice heard from the Queen of Hearts when she entered Wonderland through the rabbit hole: these words, and most of the terminology of dog training and behavior, mean exactly what the speaker thinks they mean at the moment he utters the words, which varies from person to person as well as time to time, even in the same discussion. Nevertheless, an appreciation of the commonly used terminology, imperfect as it must be, is a prerequisite to learning about dog behavior and training.

On Aggression

In the introduction of his seminal book *On Aggression* Konrad Lorenz defines aggression as "the fighting instinct in beast and man which is directed *against*

members of the same species." Lorenz goes on to explain aggression as an evolutionary instinct which emerged as the foundation of social order, that is territory, social rank and sexual preference. An important function of aggression is maintaining separation, spreading a species over large enough individual or group territories for sufficient resources to maintain life, particularly food. (Lorenz, 1963)

The concept of aggression as a phenomenon within the species, a mechanism for social order among the same sort of animal, is fundamental. Predators hunt in order to eat, and aggression within the species is an ongoing mechanism of social order as when a pack of wolves repel outsiders or two rams bang heads in order to gain sexual precedence. Violence between different species in nature beyond hunting for food, or efforts to repel the predator, is unusual because nothing important for survival is at issue and all violence risks life limiting injury.

The immediate problem in a book about police dogs is that most of our discussion of aggression concerns the use of dogs to pursue, engage and hold men, a different species. The resolution is to think of the dog as being integrated within the human social structure, which makes the aggression against other men an extension, beyond nature, a consequence of the original intra species social integration.

Aggression is a fundamental aspect of most creatures, but its manifestation must be limited and restrained in order to maintain social order but yet not lead to the extinction of the species through unnecessary violence. In the relentless world of natural selection animals fight only out of necessity, that is, to preserve territory for feeding and to produce and raise offspring, for mating precedence, to drive off other animals from a kill to obtain food, or to defend a kill. Most engagements are in a sense ritualistic, almost always broken off short of death or serious injury when the outcome is clear, or when one participant retreats in order to live for another day. Aggression is necessary for life, but social mechanisms must minimize actual physical engagement in order to preserve life from one generation to the next.

So aggression does not and cannot mean a propensity to fight on any pretext, with nothing to gain, to go out on hunt and destroy expeditions with no specific purpose like some young male specimens of homo sapiens prowling bars with an obnoxious attitude to provoke a drunken fight just for the fun of it, or to establish the aura of masculinity.

Inherent aggression as the evolutionary produced mechanism for establishing territory, rank order and sexual preference and the incessant need to hunt down food are the twin foundations defining the behavior and character of all predators and their interactions with other creatures. This is true of both dog and man, and the integration of canine social structures and instincts into the human relationship brings an entirely new level of subtlety and complexity to the relationship. There is a tendency to think of aggression as applicable primarily to the protection or police pursuit and active search aspects of canine training, but to do so misses the fundamental point. Instinctive aggression is an inherent driving force in all creatures, including man, and comprehending and adapting training procedures and philosophy to these primitive instincts and drives is fundamental to all training. In a broader sense, beyond the world of dogs and dog training, a modern comprehension of the role of aggression in human behavior is fundamental to the understanding of history and the social order as a whole.

Thus through the work of Lorenz and other ethologists we have come to understand that aggression is a fundamental aspect of all animal life, and is especially important and complex in predatory species such as dog and man. In creating the police patrol dog, mankind has redirected and controlled the canine aggressive potential to his own benefit, substantially modifying and directing these natural instincts and capabilities through breeding selection and ever more sophisticated training methodology. Effective police dog training thus must be based

on this knowledge, both formal and academic as established by men such as Lorenz and even more fundamentally the practical, instinctive knowledge that has evolved over the thousands of years of the human-canine partnership.

There is a significant range of aggression in individual dogs of the protective breeds. At one extreme is the very aggressive dog that is only truly safe in the hands of his trainer, who must be aware 100% of the time of his surroundings so as to avoid the wrong situation. Such a dog can be difficult in a home and is often a kennel kept dog. These dogs can often be titled by an experienced and capable handler, but are not generally high scoring, depending on the trial system, that is may do well in KNPV but less well in other venues.

The obvious question is: who needs it? The short answer is that such dogs need to be maintained as a resource in the overall breeding pool, that aggregate aggression tends to diminish over time and a reservoir is necessary to revitalize a breed. Many dilettantes come to desire such dogs, perhaps as an augmentation to their masculinity, but placing such a dog in the wrong situation can be extremely bad for the general public perception of a breed as a whole. In breeding there is sometimes a misguided tendency to breed tight to such a dog, on the principle that there can never be too much aggression. In reality there absolutely can be too much aggression, and great care is necessary in such breeding.

As with most complex systems and attributes, there is a general Gaussian distribution, the famous bell shaped curve, for aggression. The super aggressive dogs mentioned above are in the upper tail of the curve, and as you move toward the mean there is a sweet spot of dogs more aggressive than the mean but not extreme. This is where you find the better patrol dog, competition and breeding candidates, and companion dogs for those with the experience and discipline to deal with them, that is, such dogs can be placed in carefully selected general homes.

A broad middle range of dogs is multipurpose, that is, probably capable of a title, possibly capable of realistic police service (depending on the needs and capability of the department) and a good fit for a large number of homes. One more level down, we find is a broad spectrum of dogs that, while only perhaps capable of a title, and not a good police or serious guard candidates, make reasonable companion animals in a broad spectrum of homes.

Below this you find the dogs significantly below average, which might show aggression based on fear. Such a dog may bite, and may be dominant in a situation with a weak handler, but is on the whole not of much use and in many situations potentially dangerous. Some inexperienced people think such a dog is much more than he is, and mistakenly think of this type of dog as good police or protection candidates. A few of these dogs sometimes need to be put down because they are potentially dangerous and a liability to those placing the dog as well as those receiving it. But on the whole these are mostly easygoing dogs which should be placed in the less experienced or demanding companion homes. While such dogs always are produced to a certain extent, breeding selection favoring such dogs, often with an eye to the pet market, is generally not a good thing.

There are a few dogs only minimally compliant to command under duress, perhaps growling at a low level and subtly threatening the handler without going to the point of overt aggression, and who may lash out in an unpredictable way. Such dogs are referred to as passive aggressive. Unless this attitude reflects fear and uncertainty which can evolve into confidence and cooperation through low-key training, not always a good bet; such dogs in general make for frustration and disappointment in the training. In general I dislike such dogs; will discard one for training and particularly from a breeding program.

Handler Aggression

One of the fundamental issues of protection dog training is bringing forth the aggression against the appropriate adversary while at the same time maintaining the leadership of the handler in restraint and control of the dog. Powerful, aggressive dogs are naturally those destined to rise to the top in the social structure, which means that it is the most natural thing in the world for them to seek to dominate the handler, to perceive themselves as boss and be in control.

These strong dogs may show a strong inclination to dominate the handler and respond to a correction with an escalating show of warning or aggression. This must be dealt with in an appropriate way so as to bring control to the relationship but leave the hardness and aggressiveness there for the situations necessitating it. Achieving this balance with a good dog is the most fundamental skill necessary for successful police level training.

Beyond the initial training, this can arise as an issue when a new handler is introduced, as for instance when a dog is sold or a police or military dog needs to be transferred to a new handler. More than one handler has been severely injured when, upon taking over a previously trained dog, assuming that a bold and forceful manner will quickly bring the dog under control. A team is a partnership, and the partnership does not exist in the beginning, but must be built based on mutual confidence and respect rather than brute force. Ignoring this can produce a beaten down, ineffective dog or a dog that will, when the moment presents itself, show dominance by attacking the handler.

My style of training is to seek to become the dog's leader, but by a thin margin, that is, be able to direct his work and make the decision to out or restrain without diminishing the dog's potential to be dominant over the decoy. One must lead, but the gap between the leader and the working dog must be narrow enough to allow the dog initiative and the ability to make the decision to respond to the unexpected situation. This can be a serious conflict between the needs of the sport trainer and actual police service, for all trials are highly structured and the tendency to train for the pattern for sport success through compulsion and pattern repetition is in many ways counterproductive for effective real world service. The highest scoring sport dogs are not necessarily the best for practical service or as breeding candidates, and understanding this distinction is an important mile stone on the journey to real knowledge of working dog training, application and breeding.

Predation

Cat and mouse is an age-old game with serious purposes and consequences. The kitten is presented with an injured mouse to play with so as to bring forth the inherent chase instinct, necessary to grow up as an effective predator, and thus secure the food necessary to survive and carry on the species. There is such a strong element of play in this that cat and mouse has become a descriptive phrase for many of the games that humans engage in; and as the phrase implies there can be a great deal of aggression and maliciousness in game playing at any level. Most kittens or pups are born with the natural instinct to chase what moves and pounce upon it if he can, and this is the essence and foundation of prey drive. Notice that a rubber ball or wad of paper will incite the instinct; it is the motion that causes the chase reaction, not hunger or the nature of the object. Growing up is becoming an effective enough hunter to feed and reproduce, a process that may take months and years under the guidance of the mother or pack, and a great deal of trial and error. But the inborn prey instinct – present in the beginning – is the foundation. Predatory instinct is what makes the terrier kill a rat, a fox run down a rabbit and a wolf pack run the deer or the moose.

Trainers and breeders tend to think of canine protective behavior – "prey" and "defense" – as a simple one-dimensional continuum. We speak of a dog being predominantly one or the other and make reference to a dog's fundamental character as in a 60/40 ratio of prey to defense. In reality this is an enormous over simplification of complex processes. The so-called prey drive is a manifestation of a whole sequence of instinctive predatory actions culminating in the consumption of the prey as food. The defensive process, fight or flight, is also a complex set of interactions. These are distinct processes with different objectives – food for sustenance and avoidance of becoming the meal of a predator. They are related in that the instinctive defensive actions evolved to avoid being eaten and also for reacting to the threats of same species aggression relating to territory, sexual preference and social rank.

Most dogs will chase a cat that runs, and if he can catch him will kill him. But if the cat turns and takes a stand the dog may back down in confusion, for flight was the immediate cause of the chase and when it ceases the drive may abate. In this scenario the dog begins in a classic predatory sequence of instinctive responses, but when the cat turns there is a decision point, he will likely carry through and kill the cat, but he may switch into a defensive mode where fight or flight become the options. This dramatic shift of mode will reveal much of what the dog is made up of, which was the rationale for the flight and then turn in the original Schutzhund courage test, now lost on the altar of political correctness.

This inborn instinct to chase and kill is fundamental in all predatory animals, so much so that the conventional wisdom is that herding originated as an adaptation of this complex instinctive process. Modern gun dogs, the retrievers and pointers, were also created by modifying the instinctive predatory process through selective breeding, as were the herd guardian and police breeds. When a dog bites and shakes an arm or a sleeve, it is natural to see this as a manifestation of this age-old hunting instinct, in which the shaking motion serves to break the back or neck.

In evolving the police breeds we selectively adapted elements of both the complex primitive predatory process and the defensive instincts which evolved to evade predation and cope with inter species aggression. Just as the enormous diversity of our canine breeds – from the large and ponderous Mastiff to the petite Poodle – was and is potentially available in the foundation genetic resources, the moral and character attributes of the police breeds were also incipient, brought forth by man through selective breeding. Since this process takes place over a few hundred or thousand years, much too short a time for random genetic mutations to be the driving process, we know that we are merely rearranging – emphasizing and suppressing – what was present in the primitive ancestral gene pool.

Furthermore, although the primitive fight or flight response, present in all animals, prey as well as predator, can elicit an aggressive response when the animal perceives itself as cornered, the more advanced police dog functions, such as building searches and suspect pursuit, are based in the complex suite of hunting instincts and responses.

Ethologists such as Coppinger[2] envision the predation process as a complex sequence of instinctive actions, which they refer to as motor patterns. In the

[2] Much of this discussion draws on Chapter 6 of the Coppinger book, which I strongly encourage the reader to purchase and study. (Coppinger & Coppinger, 2001)

broadest sense, applicable in a general way to all carnivores, the hunting or prey process is enumerated as:

orient > eye > stalk > chase > grab-bite > kill-bite > dissect > consume

In this scenario some motor patterns or responses may be omitted or emphasized as adaptions to specific natural situations according to diverse factors, such as terrain and attributes of the predator and prey. In general the big cats excel at the eye and stalk because, while very fast in the beginning, they quickly tire. If a leopard cannot creep close to his prey, he is probably going to go to bed hungry. The wolf not so much, the pack quite often is able to run its prey down over much greater distances.

In a similar way, men create lines and breeds of dogs for specific purposes through selective breeding and training, suppressing or accentuating the instinctive predatory motor patterns according to need and circumstance. Perhaps the most important feature of this for the practical working dog breeder and trainer is that the adult configuration of these patterns, although dependent on genetic potential, is established and solidified through the imprinting process. Herd guardians have virtually no eye or stalk propensities because they are an integral part of the flock during the imprinting process, and individuals separated during the very short imprinting time become useless as guardians. The famous eye and stalk of the Border Collie are the most obvious manifestation of this, and illustrate how fundamentally herding in its diverse forms is just different, imprinting selected, manifestations of the ancestral predation process.

As Coppinger so eloquently points out, this process is the essential resolution of the old nature versus nurture controversy, not only are nature and nurture part of the process, opposite sides of the same coin, a huge component of the necessary nurturing takes place during a few, critically timed, days and weeks as the imprinting process. There is only ever one chance to get this right. The nature aspect of this is essential; the propensities must be incipient in order for the imprinting process to draw them out. Attempting to raise a Border Collie as a guardian and a Komondor as a herder can only, inevitably, ruin two perfectly good dogs.[3]

The orient phase of the predation process is the seeking, actively searching or lying in wait, of a potential prey animal. The eye phase, exemplified by the eye contact of the Border Collie, is a challenge process where the commitment to the actual engagement commences.

The stalk is the attempt to surreptitiously approach as close as possible; this is critical for the big cats because they are incredibly fast over a short distance but of limited range, they will either succeed over a few hundred feet or fail. The stalk is perhaps less critical for predators with less speed but more endurance such as the wolf. Primitive man evolved a persistence or endurance strategy in which he selected a victim such as an antelope and simply pursued it, kept it in sight or tracked it, until

[3] Those extending this reasoning to our school systems will likely become branded as politically incorrect, but any amount of money poured into school budgets cannot overcome emotional and developmental failures over the first two or three years of life.

it ultimately succumbed to exhaustion, at which point the man could simply walk up and finish the kill. The stalk probably plays little or no part in this particular hunting mode.

The chase is the essence of the hunt, but according to the physical structure of the predator – the tradeoff between initial speed and endurance – may go on for a few seconds or many hours. Even mankind has adapted the primitive predation process to his evolutionary needs and opportunities. Because of the long distance efficiency of bipedal running as compared the quadruped gaits of common prey animals human beings in warm climates evolved persistence hunting, in which they simply chased a chosen prey animal until it was brought down by heat exhaustion. In this instance, the eye and stalk phases of the predation process are of minimal importance as compared to the chase. Similarly, grab or kill bites are not critical stages when the target animal is prostrate due to heat exhaustion.

The grab-bite and kill-bite may be essentially combined in a powerful predator such as a tiger, where the kill is complete within seconds of the end of the chase, but may be distinct as in a wolf pack worrying a cornered or exhausted moose. The dissect process is the tearing open of the carcass, or the still living animal, for consumption. Some hunting dogs, such as the pointers, carry the process only through the eye and stalk process, the chase being the flush as the hunter's command. The retriever will persist through the grab-bite, but must return to the hunter and present the prey, omitting the killing, dissection and consumption phases. In terms of hunting dog terminology, the retriever must be bred and trained for the soft mouth. Hunting dogs which actually persist through the kill phase often are bred to cease at that point, that is, not tear open or begin consumption of the carcass.

In the police dog the orientation phase is the search, as in a building or field. The eye and stalking process are essentially suppressed in breeding and training, and the chase should end in a clean grab-bite or grip and stop short of further injury in a kill-bite, that is, the dog should not thrash the arm or leg or slash and maul.

In evolving working types or formal breeds man has through selective breeding enhanced or diminished, often to the vanishing point, various stages of this sequence into or out of his working dogs. The Border Collie style herder has great emphasis on the eye in order to intimidate and control the sheep, and might in the extreme go to a grab-bite, but actually killing a sheep is seriously faulty. (Apparently an occasional killing of a sheep is in some circumstances seen as necessary for discipline – unavoidable collateral damage – but the habitual sheep killing herding dog is going to be culled.) In hunting the pointer must not take the next step beyond stalk, that is chase, for that would cause the birds to flush and deny the hunter his shot. Prior to the introduction of firearms, and against predators or vermin even today, some dogs are bred to complete the cycle and actually kill the prey. The ideal police dog would halt at the grab-bite stage, which is why shaking the sleeve or suit in a way reminiscent of breaking the back of a prey animal is faulty. Much of the working specialization of our various breeds can be convincingly explained as emphasizing or breeding out various combinations of these motor patterns.

This prey drive sequence is fundamental to protection training, is what initially motivates the distance engagements, for the merely defensive component of the canine nature provides no reason to pursue an adversary at a distance. In nature it is almost always the instinctive – and correct – response to break off the engagement when the adversary disengages and retreats, permitting both to survive for another day. In a certain sense, when man – through breeding selection and training – brings forth dogs willing and excited to pursue and engage a human adversary at a distance he is creating something beyond the normal bounds of natural behavior.

It is entirely reasonable to think of as the dog willing to go out into a strange area, away from his handler, and attack an adversary which is not a direct threat to the dog, the handler or the home territory, as driven by this primitive hunting or prey drive. And there is an element of truth in this. But, as we shall further explore under the heading fighting drive, there has to be more to it than that. For the natural canine hunts to eat, and thus prefers the easy quarry, the old, the sick, the injured. When the prey, such as the deer or other large animal, shows strength and the ability to defend the wolf with effective survival instincts backs off and seeks easier prey, because it is better to go hungry for a day rather than risk the injury that could end life, that is prevent the wolf from hunting. Prey drive seeks out the weak and the fearful, but will tend to disengage from the quarry that shows strength because natural selection favors such discretion. Thus the effective police or patrol dog must have an extra dimension, beyond the natural hunting or prey drive, which enables it to go out the distance reliably in order to engage the foe willing to turn and aggressively defend.

Play objects

Prey drive is too often thought of as simply the propensity to chase a ball or moving object, but this is an overly simplistic a view. Many sport competition dogs will respond endlessly to the thrown ball, Kong or Frisbee, and many trainers use this as a reward and enthusiasm or drive building mechanism. On the other hand, our first Bouvier had very little ball or chase drive, and in fact would, on the second or third throw, take the object off into the bushes and bury it, yet was a dog very aggressive against a man at a distance. This was more than thirty years ago, and this was not especially uncommon in other breeds in that era. Although it has become fashionable to breed for chase object orientation, many contend that this is motivated by sport success and question whether it is, in the long term, sound breeding for actual police service dogs.

The words play and prey describe slightly different focus points on the canine temperament and response spectrum, and it is in general quite difficult to define the difference in an unambiguous way. But I am convinced that there is a difference and that it is important: the individual dog, including dogs with great practical potential, will show significant variation with some excellent dogs exhibiting strong desire to chase balls and Kongs, but others, perhaps of even greater real potential for serious protection work, will show little or no object interest. There are today trainers who will proclaim a young dog a bad candidate because he does not react in an expected way, is not a replica of a previous dog or fashionable methods. But often the failure here is in the simple minded, one method trainer rather than the dog, and sometimes a good dog is discarded because a trainer is limited in scope, unable to deal with the diversity of the working canine. The tendency of sport to increasingly reward simple prey drive is a serious problem in the police dog world today.

Many dogs with serious real world potential exhibit relatively little ball or object drive, yet properly trained will pursue a human adversary at an extreme distance from the handler, gaining power and speed with every step. This is clearly not a response to fear or the need to defend, and is not an extension of an object associated play drive. Clearly, something more fundamental, and in a sense unnatural to the wolf, is in play here. Just giving it a label, calling it prey drive or fighting drive (as we shall discuss in a moment) does not really bring fundamental understanding of the underlying phenomena.

Fight or Flight

When the cat arches his back, puffs up and dances sideways, to appear as large as possible, when the cobra spreads its hood, when the dog growls and postures, when the gorilla pounds his chest it is not to precipitate a fight or violence, but

rather a strategy for self-preservation, a tactic to make an adversary stand down, to avoid an engagement where neither side has anything to gain proportionate to the risk of injury or death.

To this point we have focused on aggression, the inter species mechanism of social order, and predation, the process of hunting in order to secure food for sustenance. For the individual animal this produces an inherently hostile world where survival is never a given, where the danger of becoming a meal, starving because of failure in the hunt or being marginalized within the species social structure is ever present. A complex set of instinctive defensive mechanisms have arisen through the evolutionary process to foster survival in this inherently dangerous world. Effective protection dog breeding and training requires comprehension and manipulation of these defensive instincts, bringing them into a useful balance with social aggression and predatory drives and skills.

Fear

Fear is good. Fear is fundamental to the nature of dog and man, is an essential survival mechanism. The defensive drive, flight or fight, is rooted in fear, and serves well when an unexpected and potentially dangerous encounter arises. Everyday garden-variety fear creates caution, is that quiet warning in the mind not to leap to the unknown without reason. Most men and dogs will instinctively step back at their first interaction with a rattlesnake, experience inbred fear and react in a life preserving manner. Those that do not back off may not live to have offspring, the primitive evolutionary mechanism creating and reinforcing this fearful propensity.

But fear is the ultimate double-edged sword. It can be excessive, and the successful creature must have the capacity, courage if you will, to overcome the natural and necessary fearful reaction and act according to the situation. While the confident, aggressive dog will certainly bite, and with proper training can be a very useful partner, excessively fearful dogs also can and will bite, and can inflect serious damage. But the fear driven dog is unpredictable, will perhaps run if he can see a way out and will respond to imaginary or perceived threats as well as situations eliciting appropriate fear. The fear driven bite is likely be unpredictable, slashing and erratic rather than full, persistent and confident.

Failure to perceive early on the difference between the confident, aggressive dog and one biting out of fear can lead to confusion and bad decisions in training and breeding selection. While careful training, home field advantage and use of the training helper as the trial decoy can often produce a title, this cannot create what is not there, more dog than that present in the underlying genetic potential. If the newly titled dog is in the hands of a sport trainer and goes home, never to see a real engagement or procreate, no harm is done. But if the title becomes the basis for placing the dog in actual service, serious negative consequences could be the result. Under the stress of an engagement against an especially aggressive foe unrestrained by sport rules, and unforeseeable circumstances, the dog may fail to engage or persist in his attack. If such a dog is used for breeding rather than service the potential consequences can be even more serious, for the progeny are likely to inherent this weakness, projecting dire consequences far into the future.

There is a great deal of bluff and posturing in the unconfident or fearful dog, and he often learns that by putting on a show people will keep their distance, giving him an element of control over his fear laden world. But when pushed beyond his level of comfort, his ability to retain his composure, the tendency is to slash out, or run, thus becoming unpredictable or dangerous. It is the responsibility of breeders and trainers to differentiate between real and apparent strength and courage and make deployment and breeding decisions accordingly.

The useful protection dog is the confident dog, in which experience and training easily predominate over primitive fear in realistic working environments. Proper

schooling, with escalating aggression on the part of the helper, incorporating novel threats to acclimate the dog to the unexpected, teaches the dog that he can and will prevail, gradually creating overpowering confidence. Such a dog will release promptly on command because he is confident that he can dominate, and go into a strong, assertive guarding posture. The correct bite is controlled and focused through the confidence of the trained response and the handler is able to bring the attack to an end with a verbal release command because of this same confidence.

Experienced trainers come to understand that clever training can often partially mask or redirect deficiencies in a dog's inherent character. All protection training is to some extent directed at overcoming fear; allowing the dog to react predictably and usefully in spite of fear. The problem which arises with the marginal dog is that he may be trainable to the point of doing well in known situations, such as a trial, but revert to a fear driven response in the face of an unexpected, new situation. This is a difficulty in all training, for it is impossible to foresee and prepare for everything the dog might encounter in a working environment.

Thus while a reasonably confident dog can be acclimated to overcome natural fears, there is always the potential, in any dog, that he will revert to a fearful reaction in a new situation. This is why it is important that the handler understand the nature of his dog rather than just a few commands, so as to the extent possible foresee and correctly respond to such situations.[4]

Defense

Defense is a fear driven response to a perceived threat, directed at self-preservation of the individual and thus ultimately the survival of the species. When the threat is real the defensive mechanism can often preserve life, but when the threat exists only internally, in the mind of the dog, it can seriously interfere with other life sustaining instincts. In nature fighting, as opposed to hunting for food, the predation process discussed previously, needs to be a last resort because of the ever-present risk of death or a crippling injury. There is often the need to defend food as in a carcass in the face of a determined scavenger, for sexual precedence or to maintain group or individual territory. But when these ends cannot be achieved by bluff or posturing discretion often is the better part of valor, a creature can survive many engagements where backing down was not really necessary, but a single injury can be life ending if it renders an animal unable to hunt the food necessary for survival or evade ever present predators.

In dog training this instinct to defend, referred to as the defensive drive, is a fundamental aspect of the canine instinctive response which needs to be called upon and used, but in a most cautious and restrained manner. Old-fashioned area protection dog training, that is, the proverbial junkyard dog or the primitive military sentry dog, tended to rely primarily on building up fear in the face of intruders and in breaking down the inhibitions of aggression. Control, other than the ability of the handler to place, remove and care for the dog, was not a requirement. This primitive form of training is less and less useful today, where there is emphasis on control and restraint in non-threatening situations, in developing discretion in the dog. (Incessantly decreasing cost of electronic surveillance equipment and expanding legal liability have played an important role in the reduced demand for such dogs.)

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[4] This is of course not limited to dogs; none of us can be certain how we will respond to a sudden, fear provoking situation until we come face to face with it.

As we have seen, defensive drive is based in fear. Fear is a powerful and necessary response to what is perceived as a serious threat. In men, dogs and most other advanced creatures there are powerful physiological reactions, including the release of adrenalin into the blood stream. In this state, created by nature for literal fight to the death or flight for survival, creatures are capable of physical and mental feats otherwise beyond their potential. There are risks and costs to this process, which is why in nature it is reserved for the most serious circumstances.

The old fashioned junk yard dog training, where the dog learns through negative experience that every human being except a few handlers are the enemy, to be feared, to be attacked preemptively at every opportunity. Just as this style of dog has become much less common because of the liability, cost and the emergence of video and electronic surveillance, this mode of training, based in fear and unthinking, preemptive attack response, is also rapidly becoming obsolete, along with the old fashioned pillow suit.

In protection dog training, creating a situation that will routinely bring forth a pronounced defensive reaction in response to purposefully incited fear is a double-edged sword. It can make a dog bite, and bite hard with great determination. But the extreme manifestations of fear reaction are reserved by nature for the emergency, and the routine inducement of fear for a desired response in training, in a trial or on the street is difficult to produce reliably, stressful for the dog, the handler and the helper and fundamentally unreliable. Fear can also make the marginal dog run, and once the dog runs this may become the natural response, easier each time it occurs.

The defensive instinct is in play at some level, and necessary, in all protection work; but it needs to be used minimally and with restraint, in an ancillary and supporting role rather than as the primary motivational force. In society today, it seems reasonable that those dogs that can only show aggression in response to purely defensive instincts should not be trained at all; and furthermore that for the primarily protective breeds such dogs should not be bred.

Although our current explanations of canine behavior have been focused on the instinctive aggression, predatory and defensive processes, further insight has proven necessary. The traditional two dimensional world of prey and defense is overly simplistic; there is much more to modern police service dog behavior than a simple extension of the primitive instincts to hunt for sustenance or respond to a perceived threat out of fear.

Fighting Drive

In the primitive natural state, the wolf and other predators have no reason, no survival related purpose, to go into unknown territory and pursue a creature presenting no immediate threat, aggression with no specific survival function. In contrast the inherent purpose of the police service dog requires that, when the situation arises, he must at human direction pursue and engage a man at a significant distance or search deep into a large, dark, unknown natural area or building such as an empty store, factory or warehouse. Clearly something else is in play. The term fighting drive has come into use to describe this propensity to pursue and engage at a distance.

Some hold to the view that this is an unnecessary complication; that the dog pursues at a distance out of simple prey drive. The conventional response to this is that the prey chase is opportunistic, usually ending in failure because the prey is too fleet or physically threatening, that something else must cause the dog to persist even when the fleeing adversary turns and becomes aggressive.

In my view the foundation of fighting drive is inborn, instinctive aggression as understood and described by ethologists such as Konrad Lorenz, taken to a new level through breeding selection. The dog running hard to engage a distant man with great vigor is driven by impulses and desires akin to the competitive human athlete, as exemplified in our inherently aggressive sports such as American football. In both instances, these drives are beyond the necessities of survival, as explained in terms of prey and defense, are extraordinary in that the fulfillment of or reward for the aggressive desire to strike and engage is the action itself, the spirit of winning, which we have come to call fighting drive. The line between fighting drive and stupidity can be thin; many football players suffer grievous, accumulating brain injuries casting a deep shadow over the remainder of their lives.

Competitiveness is an essential aspect of the police canine character, and a fundamental component of the development is to bring forth and solidify the latent potential through successful training scenarios. The inborn drive to dominate in the struggle for food, to mate, that is, for sex, for the dominant role in the social hierarchy were necessary attributes in the successful wolf and other predators and carry on in the work of today's service dogs. In this context, it is seems reasonable to believe that the wellspring of fighting drive is to be found in the inherently competitive nature of the individual dog, aggression instincts necessary for survival and prosperity over the centuries, enhanced through breeding selection.

In the longer distance aspects of dog training as a protection activity the hunting or prey drive will generally create the initial pursuit of the adversary, and if the man continues to run and allows the dog to take the sleeve or bite the suit while fleeing these instincts may be sufficient. But when the distance closes and the man turns and responds with aggressive postures and actions other drives must come into play.[5] Most hunting engagements by the predator in nature fail, because the prey has strong survival skills and instincts of his own, and because it is better to disengage than risk injury. Primitive defensive instincts are fight or flight under attack, and thus not the source of the drive to engage at a distance where there is no direct threat.

While a potential for fighting drive must be latent in the ancestors of the dog, in a certain sense it can be thought of as the creation of man, as a necessary extension, through breeding selection and then training, beyond those drives evident in nature to create something novel and useful, the modern police service dog. Wolves do not occur in nature with the massive size or foreshortened muzzle of the larger mastiffs; but the genetic potential was there for man to bring this structure forth through breeding selection. In a similar way, the potential for what we call fighting drive was latent in nature and brought forth by man through breeding selection for our specific needs and desires. Indeed, this enhancement of the capability for the strong distance attack is an essential aspect of the creation a police patrol style breed. While this may not be the drive initial training is based on, may not appear until later in the training process, it is the fundamental defining attribute of most if not all serious high-level protection, that is aggressive search and pursuit dogs.

Fighting drive has been a topic of incessant ongoing debate and discussion among dog trainers. Some dismiss it as imaginary and simple obfuscation, people

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[5] This is why the elimination of the turn on the dog in the Schutzhund courage test seriously lessened its selective value from a breeding point of view.

making things more complex than they really need to be. Others see it as the Holy Grail, the key to the understanding of the protective canine. Real understanding of what we have come to call fighting drive requires that it be perceived as a manifestation of primitive aggressive instincts, solidified and directed by man to his own ends through selection – breeding decisions made through training, evaluation and testing.

Hard science is based on experimental verification. Albert Einstein pondered the working of the physical universe and devised a theory and a set of equations now known as general relativity. One of the consequences was the prediction that light is subject to gravity because of its energy created mass, and that the path of light from a distant star passing close to our sun would thus be deflected, causing the star to appear to shift position. This was unforeseen, but when the observations were made the deflection of light by gravity was verified and Einstein's theory was vindicated.

Prey and defense are simplifications, some would say over simplifications, of science increasingly well established through the work of Lorenz and the other twentieth century ethologists. Fighting drive is a little bit more difficult to relate directly to this body of knowledge, but perhaps one useful way of thinking about it is as an extension or enabling mechanism for the maintenance of territory in the sense of Lorenz.

Concepts such as "fighting drive" are not hard science in that they make specific, verifiable predictions; there is no experiment to be performed to prove whether or not it actually exists as an objective reality. My view is that it is a useful concept that presents a plausible model for observed behavior and brings into play the idea of behavior manifestations to some extent created or at least enhanced by human selection in breeding, useful in the overall understanding of the police dog in terms of breeding and training. Whatever your personal views might be, the terminology has come to be in general use, which one must be aware of to understand and participate in discussion of canine behavior and training.

Hardness and Sharpness

The term hardness refers to the dog that is very strong in the pursuit and bite and, particularly, responds to overt aggression on the part of the adversary with even more aggression and drive. Hurt the hard dog and he will come back to hurt you more rather than disengage. Hardness is in a general sense the opposite of shyness in the protection work. In some contexts the hard dog can tend to insensitivity to handler correction or even evolve into handler aggression. Usually the dog very hard in fighting the helper is also less sensitive to physical correction, and if not brought along with care can become handler aggressive. Although positive only training, denying the need for vigorous physical correction, has become quite fashionable in certain circles, hardness as an aspect of aggression is a necessary aspect of police dog breeding and training, and sometimes a hard and aggressive dog requires a hard and aggressive edge in the boss to establish a useful working relationship. This is usually minimal when an experienced, competent trainer begins with the pup or young dog, but the older dog who has been allowed to discover that most people will back down will from time to time require more severity. This requires great care, for losing a confrontation with a dog can produce serious injury to the man and an even greater training problem.

For this reason, with very hard dogs it is important to introduce the out early and with emphasis on the concept that the best way to the next bite is the quick out and intense guard. A dog with extreme hardness can be very difficult to force to release and once the dog becomes habitually disobedient to a release command the quick, clean, reliable out can be very difficult to achieve. The guys hanging around at the club may be impressed by the dogged refusal to release, but judges in a trial or

court of law are much less likely to be understanding. I personally tend to like most hard dogs, but that may be a flaw in my character rather than a rational response, for the hard dog, not brought up carefully, can be the difficult dog. In a world where many dogs are trained and then sold to military or police departments, the potential down side is that a really hard dog assigned to the handler not quite psychologically tough enough to deal with it may become a liability; sometimes it is wise to be careful of what you wish for. Military dogs for instance may have several handlers in a career, and it is unlikely that all of them will be very experienced and dominant.

The sharp dog is the very intense dog, very quick to bite. This tends to be the more defensive dog, rather than the high prey and / or play dog. The sharp dog sometimes has a tendency to be an insecure or fearful dog and such dogs are often perceived by inexperienced people as desirable police or protection dogs, which very often is not the case at all.

On the other hand, a sharp, confidently aggressive dog can be an extraordinarily impressive and effective dog in the right situation, in the hands of a particularly good police handler for instance, and there are trainers who find such dogs exhilarating and just plain fun to work. The problem can come if the dog needs to be taken over by another handler. If, for instance, there were to be a police administrative decision to transfer the dog where the person making the selection was not an experienced canine smart person, the dog might wind up in the hands of an inadequate new handler. This is not necessarily a matter of an inferior or poor handler, but just a mismatch between the dog and the handler. Such a dog has the potential to be aggressive to a new handler if the acclimation and training adjustments are not done in a careful and confident manner.

For me, personally, a little bit of sharpness goes a long way, for a moment's hesitation between the perception of the threat and the engagement of the dog can give the handler the moment he needs to rein in the dog and avoid biting the wrong person in the wrong situation. Of all the aspects of the canine nature, sharpness is perhaps the most aptly compared to the double edged sword, and most of us would tend to prefer slightly less sharpness to a little bit too much.

Sharpness combined with inherent insecurity or fearfulness, often referred to as the sharp-shy dog, is a volatile and dangerous combination. Such a dog will be prone to make quick, perhaps unprovoked, lunging attacks, and then retreat ready for another strike, or to run. This dog is in general most undesirable and unless handled very carefully can be quite dangerous. Such dogs are difficult, and if these propensities are pronounced should in general not be trained or bred. Sometimes it becomes necessary and appropriate to put such a dog down.

Confidence and Sociability

Confidence and sociability are often thought of as synonymous, different words for basically the same thing, but there are important distinctions. The confident dog is relaxed among strangers because he is not inappropriately fearful. He may or may not be social, that is, may or may not want or accept touching or familiarity by strangers. Confidence and sociability in the adult dog are more than any other aspect influenced by the initial imprinting in the critical puppy time periods. Some people seem to think that severely restricted socialization will make the pup more aggressive, a better protection dog. My opinion is that this is exactly wrong, the aggressive drive is there or it is not, and all of the isolation in the world will just accentuate fear and the lack of confidence of the inherently inferior dog, creating a dangerous rather than useful dog. A good strong dog benefits enormously by appropriate early socialization; he does not have to become everybody's friend, but he does have to maintain distance and composure in diverse social settings. As a personal experience, a couple of my most aggressive and strong Bouviers were everybody's friend if approached with a little bit of good sense, almost anybody could

pet them and play with them. I like that in a dog, it just made my life a whole lot easier, and these dogs would flip into drive in a flash when seriously provoked or in the presence of the helper. Other, equally good, dogs will only accept social interaction as a trained response under the insistence of the handler, which is an important reason for the careful matching of handler to the propensities of the dog.

The extreme social dog, whose world is full of friends he has yet to meet, usually is perceived as very confident and is often especially desirable for the typical companion dog owner. The protection dog, on the other hand, lives in a world where there are people other than new friends, where an element of wariness is necessary, where being social to the extent of total acceptance of strangers is indistinguishable from stupidity.

A certain level of confidence, with a touch of fear to create awareness of danger, is generally a good thing, but being confident is different from being nice or social. History indicates that Attila the Hun was supremely confident, believed absolutely that when he conquered the entire subjected population was at his disposal, the woman for his sexual gratification, the children to sell into slavery the men to slay or enslave according to his pleasure or convenience. Bullies in all contexts of life are generally confident, because they exhibit this behavior in an environment where experience has shown it to be effective, where they are personally invulnerable.

Most serious trainers will deal with or prefer a moderately or less social dog which is hard, strong and otherwise controllable.[6] We need a dog that will become suspicious and alert when there is a potential or overt threat. Suspicion and reserve can be thought of as the opposite of sociability, and the overly social dog will often not take his protection work seriously enough. Thus sociability in the protection dog in moderation is in general a desirable attribute. The social dog is one at ease among strangers and in new and different places. He can be walked in a crowd of strangers on a loose lead and his aggression is selective and controlled. Most handlers do not want strangers to pet or interact with their dog and discourage such manifestations of what are perceived as sociability in the companion dog.

In the service dog context, the confident dog is the secure dog which will tend to react only to a clear provocation and will retain composure and demeanor under stress. Where the overly sharp dog will tend to the preemptive bite, which may be inappropriate, the confident dog, appropriately raised and trained, will give a strong warning and hold his ground. The overly sharp dog may be lacking in confidence.

Sociability is perhaps the most desirable attribute in the family pet where the owners want a safe, easy to deal with dog and do not expect any protective functionality. Thus the highly social dog is the best dog in the vast majority of situations. But this level of sociability, to the point where a real threat does not alert the dog, is inappropriate for dogs of the protective heritage. Sociability is especially subject to the imprinting process, is influenced and established in the critical stage of puppy development, most influential approximately from when the eyes and ears open until about sixteen weeks or four months.

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[6] I do not personally prefer a less social dog, but will deal with it when the other aspects are of value. One of our females came back to us as inherently unsocial, but was a good breeding resource. Sometimes this comes from bad early experience rather than genetic factors.

Confidence is to some extent genetically predetermined; while appropriate puppy imprinting and socialization are desirable in all dogs, some are born with a predisposition for inappropriate fearfulness and insecurity which can only be covered up, cannot be corrected by socialization and training.

Intelligence and Trainability

From time to time there are articles in the press ranking the relative intelligence of various animals or the canine breeds. This is mostly nonsense, for at root it relates to subservience, the willingness to perform tricks for praise or a treat, rather than fundamental differences in cognitive power. Dogs such as the sight hounds or herd guardian breeds often rate poorly, but this reflects the nature of their work, often devoid of human interaction. The herd guardian is bred and socialized to be stoic and devoid of responsiveness to human beings, to be concerned primarily with preserving the herd from predation. The Bloodhound is single minded and plodding, unresponsive except to the scent he is following, but on the trail he brings new meaning to the word dogged. The retriever or pointer is bred for and knows his work, and is unlikely to be flashy or animated in the view of the casual observer, unaware of the actual requirements and function. Dogs bred and selected for independence and reliability may appear lethargic because thoroughness and persistence are the essence of their functionality.

Intelligence in the canine is difficult to define and quantify because our tendency is to relate it to human modes and reactions, largely verbal in nature, and thus not entirely appropriate to understanding the dog. Bernie Brown, well-known Golden Retriever AKC obedience trainer, has commented that you need a fairly stupid dog to put up with the nonsense in this rote sport. There are dogs capable of associating several dozen words with various toys and fetching the object from another room on verbal command, and thus applauded and perceived as very intelligent. But what is the practical utility of this sort of thing?

Intelligence is in a certain way a detriment in the trial, for it can lead to initiative and independent action, and the judge busily detracting points for disobedience rather than awarding extra credit. The dog who moves on the long down to rest in the shade demonstrates intelligence and initiative, but the judge is still going to take ten points and the handler is going to be frustrated, and perhaps a little bit angry. This is why they are called the obedience trials rather than intelligence tests, and is an implicit indication of what we really value in a dog.

Trainability, the willingness to understand and comply with handler commands, is a vitally important aspect of canine application, but is, contrary to common perception, different from intelligence. The Border Collie, working in response to intense handler interaction and command to maneuver the flock, appears to be and is extremely intelligent, and ranks at or near the top of most lists. But the herd guardian dog, often working alone without guidance, surely takes on more real responsibility.

Wolf pups, even taken from the nest and intensively socialized, with no contact with adult wolves, are extremely difficult to train, unreliable and treacherous. It is the adaption to the human social structure, where compliance with human direction and command is essential, where trainability was introduced. In actual fact, by observation of problem solving ability, such as defeating cage and fence latches, wolves are in general much more intelligent than dogs, that adaption to the human social structure was in a fundamental sense a dumbing down process. (Coppinger & Coppinger, 2001)

Thus trainability, the willingness to accept a human leader while still maintaining the potential for aggression and event initiated reaction, is something added, or at least greatly enhanced and emphasized, in the domestication process as wolves, directly or indirectly, evolved into dogs. So, in a fundamental way the price of

trainability and compliance, working willingness, has been the diminution of real intelligence, in the sense of independence and mental initiative. (Sometimes our school systems seem to emphasize trainability and rote memory; perhaps we are also "domesticating" our children.)

In creating the police patrol dog, we needed to regain a measure of these ancient wolf traits, that is, breed larger, more aggressive dogs with larger teeth, more powerful jaws and more real intelligence. Yet more and more our sport trials demand rote obedience rather than initiative, for reasons of political correctness and the commercial salability of pets. Perhaps there is something wrong with this picture.

Born and Made

Comprehending the principles of animal behavior and molding it through breeding and training has been fundamental to the evolution of mankind at least since the dawn of agriculture. This process began on a heuristic, practical basis as breeding and training knowledge passed down hands on, father to son. As this practical knowledge struggled to become science it came to be understood that behavior has two fundamental, underlying determining mechanisms, that is, innate inbred propensities and potential present prior to birth and then the subsequent life experience and training. This in and of itself is not a great revelation, for every child born in a village or on a farm throughout most of history came to understand, at least implicitly, that it would be extremely difficult to train one of the barn cats in the same way as one can train a dog or a horse.

Thus the science of ethology sprang from this age-old desire to comprehend the roles of nature and nurture, to understand to what extent animal behavior is determined by genetic predisposition and what is the role of nurture, that is upbringing and training. The work of Lorenz and other ethnologists in the middle twentieth century produced fundamental new understanding, providing an evolutionary perspective to common behavior mechanisms such as aggression and predation. Nurture is not just the aggregate life experience after birth, but is a process with distinct time periods where experience and learning profoundly mold the behavior and function of the animal for the remainder of life. In the days and weeks after birth the brain continues to grow and undergo permanent changes, hard wiring as it were, strongly affected by the associations and experiences of the the young animal. This is the imprinting process. At very specific times in the early life cycle, which vary markedly with species, windows of opportunity to mold future behavior shut, forever limiting or expanding the potential of the animal to function in the world in which it finds itself. This is of enormous practical importance in breeding, training and utilizing dogs of all kinds and purposes; for the most fundamental truth about dogs and work is that the excellent working dog is based on the foundation of proven working lines and in equal importance the character solidification in the first weeks of puppy life. Formal training of the young dog is based upon and limited to the potential of this foundation. Poor training of the older dog, if not actually abusive, can often be overcome; but a poor foundation in terms of breeding lines or inappropriate puppy experience can never be entirely rectified. In particular, the pup born in a kennel and denied sufficient human interaction and other experience before about sixteen weeks is irrevocably different from his sibling benefiting from extensive, well-founded socialization

Everyone involved in the selection, training and deployment of police dogs comes to believe that consistent success requires dogs from the appropriate breeds, and further that the lines must be those recently verified as to working character. American police departments no longer make public appeals for donated dogs and generally are not open to accepting offered donations. The reason for this is that police trainers have come to realize that the dogs must be both born and then made,

that it is difficult and cost prohibitive because of failure rate of training dogs not out of established breeding lines. The less obvious reason for such care in candidate selection is that the dog with inappropriate socialization and imprinting in the critical weeks is forever limited in ways that cannot be known from physical appearance, the pedigree and to some extent even in initial hands on character evaluation. Donated dogs are available because someone does not want them, and poor breeding or permanent character limitations because of puppy socialization are likely reasons for the dissatisfaction.

Thus a primary contribution of Lorenz and his generation of ethologists is the concept of imprinting and the critical stages of social development. The original work of Lorenz primarily was with geese and other creatures, but the principle of imprinting has proven to be general to most species. For the domestic dog, the original, formal observations were a result of studies and experiments commencing shortly after WWII at the Jackson Laboratory in Bar Harbor, Maine, associated with names such as Fuller, Scott and Marston. (Scott & Fuller, 1965)

The reason for this profound long-term effect of the socialization process is that the actual physical structure of the brain itself is altered. As Coppinger notes:

> "At birth a puppy has essentially all the brain cells it is ever going to have during its whole life.
>
> If the puppy brain has essentially the same number of cells as the adult brain, how can it grow ten times bigger? The answer is that brain growth is almost entirely in the connections between the cells. Of all the brain cells present at birth, a huge number are not connected or wired together. What takes place during puppy development is the wiring pattern of the nerve cells. Some nerves make their connections spontaneously, driven by internal signals. Some nerves actually "look" for a muscle to attach to. Other connections are motivated by external signals. External to the brain, that is. For example, the eye tells the brain how many cells it needs to have in order to run the eyeball. Big eyes need more cells than small eyes, and thus animals with big eyes tell their brain to connect up a greater number of cells for eye function.
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> It is not only the size of the eye to which the brain must accommodate, but also the activity of the eye. The brain accommodates to the eye by growing the appropriate connections for both its size and its activity. The brain of a puppy raised in the dark doesn't make as many connections. A puppy that is raised in an impoverished environment has a smaller brain. It has the same number of cells, but not as many get wired together." (Coppinger & Coppinger, 2001) p.111

For the domestic dog, the critical period of social development is from approximately two weeks, the opening of the eyes, to sixteen weeks; providing socialization and broadening experiences in this time period is fundamental for a pup to grow up into a well-balanced and trainable dog. (The fact that the wolf has much different, generally earlier and shorter, critical periods is a fundamental reason for the difficulty in taming and training.)

The work of these scientists is of course significant and most commendable, but for centuries before Lorenz and his associates won the Nobel prize for reporting these discoveries illiterate shepherds knew that for the pup to become a successful herd guardian he must almost from birth live with, sleep with and associate with the sheep, suckling along with the lambs on a ewe. The pup is often separated from the mother, littermates and human contact and totally immersed in the life of the flock, living exactly as a lamb. Puppies from even the best lines of working herd guardians

are virtually useless for this work if they are raised to four months without intimate contact with the sheep and the flock.

While the window of socialization and imprinting opportunity for the pup is from eye opening or about two weeks to sixteen weeks, the wolf is significantly different. The wolf pup becomes capable of socialization and imprinting at eye opening or 13 days just as the dog, but the window is open for a much shorter time, ending at about 19 days at the onset of hazard avoidance behavior. Thus while the domestic dog is open to socialization for about 16 weeks, the corresponding period in the wolf is less than a week, which is a further indication of the difficulty that is encountered in attempting to tame and train a wolf.

There is a general tendency to think of nurture in terms of formal training, but this misses the mark in fundamental ways. The profound transformation in the brain of the pup in the first weeks has a long term effect on the nature of the adult, either setting the stage for successful training or at the extremes of early deprivation producing an adult essentially un-trainable and of little practical use.

Just as we have found that it is very difficult to educate children entering school at five or six years of age without the benefit of good nutrition and a foundation of knowledge, linguistic ability and basic acceptance of deportment fostered in a stable early home life, training the year old dog is very difficult if he is not healthy and has not been properly socialized in the critical period and grown up in a supportive environment, with strong human bonds and relationships.

These principles of performance based breeding selection, proper imprinting in the critical periods, good nutrition, exercise and social development in the younger pup set the stage for the training of the maturing working dog. This has to a large extent been understood practically and intuitively over time, but the accumulated knowledge of scientists, breeders and trainers over the past century has given us the potential to breed and train better dogs capable of greater service to mankind.

Unfortunately, the AKC and FCI purebred show dog world encourages exactly the opposite of good breeding practice, that is, breeding on the basis of show ring politics and superficial aspects of appearance, raising pups in a kennel environment often devoid of appropriate socialization, and little or no training of the adult dog, which often lives out a dreary existence in a kennel run. As a consequence, police agencies increasingly look to sources, such as KNPV lines, in which breeding selection is practical and performance driven, often with little regard for pedigree or registration.

Angel's Lair All Breed **Angel's Lair Schutzhund** **Police Dog Book**