

Behaviour Problems of Psychic Nature in Shelter - Reared Dogs

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Abstract

This review summarizes the aetiology, the species and the prevalence of pathoethological processes of psychic nature in sheltered dogs. The analysis was performed on the mandatory necessity of establishing the type of the dog's temperament, in relation to the owners' proper approach towards the specific animal, as well as its successful primary and secondary socialisation. A neurotic dog may exhibit chronic anxiety, fear, hyperactivity, obsessive behaviour, and inappropriate responses to stimuli. Truly psychotic dogs, however, are deranged. Their behaviour is acute and unpredictable.

Keywords: categorisation, dog, illnesses, kennels, pathoethology, psyche.

1. Introduction

It has long been proven that dogs are both social and work animals. Dog is a work animal, because it is used by man for many types of activities (odourologists, guards, trackers, companions, border patrols, etc.). It is also social because it is bred as a household pet in families [1]. France is Europe's first-ranking in this regard [2]. Dogs have such a strong presence in contemporary people's lives that there has long been talk of "anthropomorphism" – imaginary transfer of canine behavioural features onto people and vice versa [3].

Most researchers working on the "behavioural psychology" of dogs believe that it is exactly the pathology with neuropsychic nature that is the most problematic [4, 3]. Since the dog, just as all other animals, is a sentient creature [5] and possesses a psyche, and even suffers from neuropsychic disorders (depressions, tics, manias, dementia, etc.). These are problematic because they can hardly be treated [6].

It should be noted that the term "pathoethological" is derived from "pathoethology" – the science studying pathological behavioural disorders in general. The scientific publication in the field of pathoethology, which looks into behavioural pathology in animals (including disorders of psychic nature in dogs) is already reality [7].

As was already mentioned above, dogs are social animals and they are under a strong influence and dependence on man [7]. This explains the fact that the most commonly observed disorders in them are of psychic nature (in terms of form). The causes for their occurrence and development should, according to Andrew [6], be sought in the early weaning of young puppies, parasitic infestation (before 6 months of age), experienced beatings, improper punishments (incorrect approach), injuries in the area of the spine and the head, prolonged medication therapy, diabetes high-degree psychological trauma [8, 4] and inappropriate rearing conditions [9].

1. Which dogs are most commonly affected by psychic disorders, and why? According to our research, these are the stray dogs [10] and laboratory dogs [11], as well as the ones reared in household conditions. The animals reared for

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work purposes become sick least often [1]. The reason for this is the owners' improper approach towards the dog. This happens due to the still unaccepted practice of categorising the dogs' nervous system type (temperament). It consists of four types, just as in humans – sanguine (L), choleric (F), phlegmatic (G) and melancholic (A – asocial). The most reliable results are achieved when the nervous system is categorized while the dog is still very young (between 3 weeks and 3 months of age). If the temperament type is known, the owner would be informed about their approach towards the animal. The contact between them would be appropriate and easier, thus avoiding stress situations. Consequently, the dog would not perceive the owner as a “stressor” [5], i.e. the way the human treats the animal is of major significance or the primary successful socialisation. This is especially true because it has been proven that such animals develop considerably fewer behavioural pathological events and long-term disorders of psychic nature [12, 10, 13, 14, 15].

One of the main reasons for the constant increase of the stray dogs' population is namely the incorrect approach of humans towards the animals due to its unknown temperament. The owner wishes to form a specific behavioural model in the dog within a short time. However, if the dog is congenitally asocial (type A – melancholic), i.e. difficult and slow to integrate within its environment, it would surely develop an ethological contradiction. Frequent physical violence against the dog would make it perceive the human as a “stressor,” developing fear with consequent aggression or depression, mania, tics. From a behavioural perspective, these pathological processes are characterised by mandatorily altered vocalisation (constant howling, barking, whimpering – the most insignificant deviation) [16, 10]. A confusing impediment in many of the cases, not only for the owner but for the neighbours as well, since the constant howling turns into a “stress” factor to the owners themselves at some point. It then becomes necessary to take the cardinal decision of separation with the dog, due to the often incurable psychopathology. How the human would act, whether they would abandon the animal on the street or bring it into a kennel depends on their value system. Studies have shown [5] that only 30% of the owners would bring the dog to a farm-

kennel. Most of the ill animals become stray dogs, increasing the population of dogs on the streets.

2. The improper rearing of the dog (hygienic technological solutions, feeding, and veterinary medical servicing) could also lead to the development of pathoethological processes of psychic nature [17]. It is often encountered at kennels (farms). The greatest ethological significance is assigned to the changes in the microclimate (higher or lower temperatures, relative humidity, air movement speed, high-frequency noise, insufficient area for a dog in the kennel's group cubicles, etc.), hierarchical incompatibility when grouping the stray dogs, development of infectious diseases due to untimely inoculation, insufficient or improper feeding, not keeping up with the feeding regimen, insufficient movement due to the lack of a walking area at the farm-kennels, etc. [18]. These are causes of various nature. They are unified by the fact that their occurrence can lead to the consequence of developing pathoethological processes of psychic nature – hard and often impossible to treat, which cause suffering to the animal as well as man [19].

3. The stress factors' duration of influence also has a great significance for the development of pathoethological processes of psychic nature [20, 4]. Their short-term and even instantaneous influence on dogs is undoubtedly and often without consequences. Still, it depends on the nature of the stress factors [21]. If the effect's duration is longer or incessant, then the described pathology is certain to occur [22]. For example, if the dogs' kennel is located near an airport (which is principally unacceptable, yet happens in practice), the animals would be subjected to constant stress (high-frequency noise – stress factor), which would cause pathology of psychic nature [3].

It should be noted that the presented aetiology is possible to find not only at stray dog kennels, but also in dogs reared at other types of dog farms (schools, breeders), and in some rare cases in domestic dogs as well [23].

Studies indicate that the aetiology of pathoethological processes of psychic nature in dogs that are being reared at a kennel is variable [10, 24, 9]. The question of the primary cause for their occurrence has not yet been clarified – the unknown temperament, the often encountered improper rearing or hierarchical incompatibility

when grouping the stray animals at the kennel-farms[25]. There is insufficient research literature information in this regard. Therefore, there are questions awaiting their answers, and they are issues of major significance because ensuring dogs' welfare (dogs, in particular) has long been an actively used concept, theoretically as well as practically. This concept specifically excludes the occurrence of any kind of pathology, including of psychic nature.

2. Types of pathoethological processes of psychic nature (psychoses)

The typical thing for them is that they are either congenital or acquired with partial inheritance and altered behaviour. The cerebrum's biochemistry is disrupted. There are various clinical expressions of these processes – fear, hyperactivity, hyperkinesia, drive to destroy, hypervocalisation, aggression, self-aggression, hypersexuality (usually in male dogs), avoidance of sexual contact (usually in female dogs), wandering, disrupted marking reflexes, coprophagia, disrupted maternal instinct (eating of the progeny – cronyism), conscious attention-seeking through specific activities (limping, tilting of the head in a certain direction, etc.), compulsive licking, scratching, biting, etc.

1. Anxiety disorders syndrome – illnesses with different symptoms but common pathogenesis (apparent anxiety). These include aggression, phobia, owner separation syndrome, dirtiness, etc.

1.1. *Aggression* – fear causes aggression in dogs [26, 27, 28, 29]. This is the dog's emotional response, specified by normal behaviour, yet finishing with biting, fairly often. In fact, aggressive behaviour is a complex of activities aimed at causing harm to people or animals [30]. It is found in illnesses involving strong pain – mulligrubs, traumas, domination urge (social-hierarchical, could be aimed at children or family members), protection of food or territory, fear of moving objects (carts, cars, bicycles), incorrect upbringing and punishment, breed predisposition (genetic aggression). Three types of aggression are known: social (establishing group hierarchy), sexual (among male and female dogs), maternal [31, 32]. There is a difference, however, between aggression and competitive behaviour. The latter's goal is the resolution of a conflict situation with

another animal through threat, fight, submission, retreat and placation. Aggression is a constant tendency towards fighting, calmness rarely occurs in this situation. It should be noted [7, 4], that apart from the aforementioned reasons, dogs can develop aggression in case of some diseases, such as rabies, Aujeszki's disease, the nervous form of distemper, encephalitis, brain tumour, brain hypoxia, endocrine disorders, etc.;

1.2. *Fear* – emotional status, always caused by a specific and clear reason, when the dog feels that it is unable to apply an established behavioural activity in a certain situation. Fear is a normal response to an actual or perceived threatening stimulus or situation. Anxiety is a response to fear and agitation, or apprehension when the animal anticipates a threat or fearful situation. Phobia is an exaggerated fear response. The fear response may include panting and salivation, tucked tail, lowered ears, gazing away, low body posture, piloerection, vocalization, or displacement behaviours such as yawning or lip licking. While avoidance and escape is one strategy, some dogs use aggression to remove the fear-evoking stimulus and are reinforced by success (negative reinforcement) [33]. There are three type of behaviour caused by fear – flight, immobility and fighting [34]. As a result of long-term active fear, variable moods can occur – howling, whimpering, crying, tremor, tics, manias, depressions, etc.;

1.3. Very often, dogs exhibit a fear of new food types (neophobia). This pathoethological activity is the way to avoid potentially dangerous foods for the animals;

1.4. *Neophilia* – behavioural deviation, through which new food sources are provided;

1.5. *Owner separation syndrome* – a behavioural pathoethological process accounting for approximately 25% of all psychoses in dogs. It is the third most common, after inappropriate elimination (house soiling) and aggression [26, 27, 28, 35]. It affects mostly young dogs taken from the street or adopted by a kennel [36]. Older animals (over 10 years of age) are affected as well, usually by cognitive disorders. The animals are strongly attached to their owner. They follow their human master, constantly need attention and try to attract it by nudging with their paws or nose, barking, etc. They often synchronise their bodily functions (sleep, eating, urination, etc.) with their owner's. The most common behavioural signs are destructive behaviour, various types of

vocalisation and inappropriate elimination [37]. Whilst inappropriate toileting may be a symptom of generalised anxiety, it is thought that destructiveness and excessive vocalisation may be attempts by the dog to restore contact with the owner by escaping to join the owner, or maintaining vocal contact [38, 37, 39]. The syndrome occurs in several forms five or ten minutes after the human leaves: destructive behaviour towards objects, destructive behaviour provoked by a specific cause of non-somatic nature, and destructive behaviour – prolonged or repetitive, defined as an obsessive-compulsive disorder [40, 41].

1.6. *Hypervocalisation* – constant barking, screaming, moaning, whimpering, howling. The duration, strength and repetition is abnormal;

1.7. *Hyperactivity* – most commonly characterised by scratching on doors, windows, furniture, clothes and other objects;

1.8. *Self-harm* (self-aggression) – biting, chewing, auto-grooming, licking, scratching of specific body parts (most commonly tail, limbs), occurrence of wet dermatitis;

1.9. *Dementia* (cognitive dysfunction, pre-senile depression, elder dogs' hyper-aggressive syndrome, entangled consciousness syndrome, elder dog's dystimia). It is exhibited through the definitive disruption of the normal behavioural model (similar to Alzheimer's syndrome in humans), specific only for older dogs (above 8 years of age). The primary clinical signs affecting behaviour are disorientation, oppression, lowered motor activity, reduced will to communicate. The animals are barely able to recognise their owner [34]. Returning from a daily walk, they have difficulties finding their home. Nocturnal anxiety, disturbed sleep (prolonged during the day), as well as abnormal movements from one corner of the room to another, change of the places for physiological processes, fear and aggression towards various people and objects – these are the primary characteristics of this pathoethological psychosis [42];

1.10. *Defecation at inappropriate places* – such behaviour could be considered normal in younger dogs during puberty [43]. At a more mature age this is a sign of psychic or somatic disorders (involuntary defecation), which occurs in case of fear from separation from the owner, for example, somatic disorders (spinal trauma – myelitis or

radiculitis, inflammation, traumas, parasites in the anal area or the perianal glands);

1.11. *Urinating at inappropriate places* – the causes are of somatic nature. Urination is involuntary (inflamed, traumatised or paralysed detrusor urine). Involuntary urination due to fear is possible as well;

1.12. *Tail chasing* - this is a symptom for an obsessive-compulsive disorder;

2. Obsessive compulsive disorders and stereotypes – syndrome of repetitive, prolonged [40] and unusual behavioural deviations. Recently, the term obsessive-compulsive disorder (OCD) has been used to refer to behavioural abnormalities of companion animals that fall into the category of stereotypical behaviours [44]. Stereotypies are behaviour patterns that are carried out repetitively and seem to have no obvious purpose [45]. In kennelled dogs, typical examples are spinning on the spot, jumping up at the kennel walls, bouncing from wall to wall, and circling or pacing the perimeter of the kennel or enclosure [10, 44]. Studies have shown very high levels of these behaviours in kennelled dogs, with between 46% [46] and 93% [47] of the dogs in some establishments showing the behaviour although at differing times of days and in response to varying husbandry events [48].

Some dog breeds are predisposed hereditarily to certain compulsive behaviours. For example, Bull Terriers and German Shepherds are commonly seen for tail chasing [49, 50]. Labrador Retrievers exhibit oral compulsive behaviours such as pica, whereby the dog is driven to pick up any object and eat it. Doberman Pinschers are well known for flank sucking, whereby the dog holds and sucks on the skin of the flank for long periods.

2.1. Locomotor-behavioural deviations, distinguished by wandering and movement in circles, tail chasing, walking or pacing in place, jumps in place, chasing light reflections (syn spots), breaking or cutting through the air (chasing flies), stupor (freezing in place), sudden anxiety (excitement);

2.2. Oral disorders – chewing or biting of limb parts, idle chew motions, periodic outward protrusion of the tongue, licking, inhaling, prolonged licking of the body (nasal sponge, paws), sucking of the paws, scratching, chewing, licking of objects;

- 2.3. Forced movements – aggressive and self-aggressive behaviour (threatening growling towards various body parts – tail, pelvic limbs, posterior body parts), followed by biting them. Aggression is sometimes exhibited towards the food and water bowls, people, animals;
- 2.4. Hypervocalisation – constant barking, howling;
- 2.5. Hallucination behaviour – prolonged and focused looking into a spot – staring [3, 4].

3. Conclusions

Evidently, the pathoethological processes of psychic nature are very serious behavioural disorders, which affect not only the dogs themselves, people as well [51].

In order to avoid allowing the described behavioural symptoms, it is necessary to have good knowledge of the aetiology of these processes, which are often resilient and untreatable [40]. In this relation, it is mandatory to implement classification of the dogs' nervous system [3]. This would be the starting point of the correct and successful primary socialisation, as well as its secondary stage, in case the primary stage had not developed per the norm [52]. This is an important condition; otherwise the owner's approach towards the animal would not necessarily be correct [53]. The consequences in this case are always related with the development of pathoethological processes, yet whether or not they would be of psychic nature depends on the impact of stress factors on the animals. If it is prolonged, the dog's psyche would certainly be affected, and the pathoethology described above would occur, which is stubborn and hard to treat.

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