



Original Contribution

STUDY ON THE BEHAVIOUR OF PUPPIES WITH REGARD TO THEIR SOCIALIZATION

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ABSTRACT

A study on the behaviour of puppies related to their adaptation to objects and subjects (socialization) was carried out. A comparison was made on the degree of socialization of puppies from two common canine breeds – German shepherd and Doberman. It was established that the degree of socialization in German shepherd puppies was better compared to Doberman puppies.

Key words: behaviour, socialization, puppies, study, test.

INTRODUCTION

Today, the dog is the most popular domestic animal. The registered dogs in Europe and the USA are more than 90 million. Every fourth household living in our continent and every two out of 5 households in America possess a dog.

The socialization issue (the process through which each individual gets accustomed to the environment where it lives) has been and is still a matter of interest for a number of researchers in the field of ethology (1, 2). It is already evidenced that in the little puppy, this process begins as early as the age of 3 weeks and lasts approximately for 3 months. It represents the time when puppies are adapted to their habitat and establish relationship with both its objects and subjects. The duration of socialization is relatively limited. It is genetically determined and is equal for all dogs, regardless of the breed (3).

The mechanism of socialization is very important for puppies as it reflects on their entire behaviour thereafter. It consists of two stages: phase of attraction and phase of familiarization.

The phase of attraction begins from the end of the 3rd week of age. From this moment onward, the puppy is strongly attracted to everything that moves. Its interest to his littermates and its mother is also considerable

(4, 5). During this phase, the animal investigates, learns, and memorizes the features of objects and subjects from its environment. In fact, it remembers some characteristics, called by ethologists “super individual” or “specific”. These are elements characterizing a given animal species and distinguishing it from another species (1).

By the age of 5 weeks, the phase of attraction gradually comes to an end. The puppy remains attached to all those it has seen and met prior to this moment. During that period, the phase of familiarization begins, when the animal is already afraid of unknown subjects and people, as evidenced by its behaviour. It runs away and does not wish to communicate with them (6, 7). The puppy is very sensitive during the phase of familiarization and that is why the period is also called a “sensitive period” of adaptation to the environment or initial socialization (8, 9). The initial socialization represents build-up of a considerable practical experience from the puppy during its acquaintance with the environment that is easily realized and hardly erased (5). If that initial socialization is not proper because of some reason, the animal could perform a second one at a later age, but it develops less easily and is very unstable (7).

There are a number of tests (6, 10, 11, 12) that allow a complete analysis of socialization extent in puppies with regard to its importance for their future behaviour.

In the available literature, there are few data about the accuracy of each test. That is why in this study, we aimed to analyse the degree of socialization of puppies by means of

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one of the less utilized behaviour tests.

MATERIAL AND METHODS

The experiment was performed in September-October 2005 in a private kennel offering Doberman and German Shepherd puppies located near to Haskovo in Bulgaria. The experimental design was made to conform to animal welfare requirements. The behaviour of 10 puppies, 5 Dobermans and 5 German shepherds, was studied using the following 4-part test (12):

Part one includes the reaction of puppies in the presence of an unfamiliar man. The animal is carefully placed on the floor. The investigator stands a few steps away in direction of the door, then crouches down and claps its hands remaining silent. The behaviour of the puppy is then observed: whether it will be attracted by the man or not. According to the author of the test (12) five possibilities exist:

1. the puppy walks immediately toward the man with raised tail, jumps and bites human hands. This is an apparently aggressive puppy with a dominant character that could be probably trained to be an excellent guard but from a very experienced trainer and after a prolonged and intense instruction. A dog of this type would not accept the physical punishment and is determined as type A (aggressive and difficult to be socialized).
2. the puppy walks immediately toward the man with raised tail and scratches his hands. This is the unpredictable dog type, and its presence is not recommended in a household with little children as it could suddenly react aggressively. It is susceptible to a long, careful and tolerant training. It is determined as type B (unpredictable, impulsive and also difficult for socialization).
3. the puppy goes immediately with raised tail. This is the balanced dog that is easily accustomed to the environment. Its character is calm and it is very suitable to be a companion to children and elderly people. It is determined as type C (calm and easy to be socialized).
4. the puppy does not walk right now to the man, it hesitates, his tail is lowered, but it still approaches the investigator. This is the obedient type of dog that should be carefully trained with a lot of affection. It could bite if frightened. This puppy is defined as from type D (obedient and easy to be socialized).

5. the puppy does not walk to the man at all. This dog that is almost not adapted to the environment. Sometimes it is aggressive, sometimes frightened. It is hard to be trained and needs a special approach, so it is not preferred by owners. It is determined as type E (very hard for socialization).

Part two of the test characterizes the ability of dogs to follow the man. The investigator is moving at a normal speed observing whether and how the animal will follow him. Here as well, five alternatives are described:

1. the puppy follows immediately the man with raised tail, runs in his legs, biting them (the aggressive type A).
2. the puppy follows immediately the investigator with raised tail and runs in his legs (unpredictable type B).
3. the puppy follows immediately the man with lowered tail. This is the representative of the calm type C.
4. the puppy hesitates, its tail is lowered, but finally follows slowly the man (it is from the obedient type D).
5. the puppy does not follow the man or even goes away from him; it belongs to type E (hard to be socialized).

Part three of the test characterizes the behaviour of puppies in reaction to compulsory actions against him. The investigator bows, places the puppy to lie on its back and holds it in the thoracic region with a hand for 30 seconds. To this, the following behaviour patterns could be observed:

1. the puppy defends itself strongly, twists and bites. This is the typical representative of type A (aggressive).
2. the puppy defends itself intensively, twists but does not bite. This is the representative of type B (unpredictable).
3. the puppy is initially resisting, but then calms down (representative of calm type C).
4. The puppy does not resist and licks the hands of the investigator. It belongs to the obedient type D.
5. the puppy defends itself, but not fiercely and then obeys. If however, the investigator lets it, it goes away and keeps the distance. This is the representative of the hard for socialization type.

Part four of the examination tests the behaviour of puppies when raised at a certain height from the floor. The investigator is crouched down. He raises the dog with both

hands in the thoracic region at a height of 50–60 cm from the floor for 30 seconds. The five patterns of puppy's response are:

1. the puppy defends intensively, bites and growls. This is the aggressive type A.
2. the puppy is only defending itself intensively (unpredictable type B).
3. the puppy is initially resisting, then calms down and licks the hands of the ethologist. It is a representative of the calm type C.
4. the puppy does not resist and licks the hands of the investigator (obedient type D).
5. the puppy does not react and if let down on the floor, goes away from the observer (it belongs to type E – hard to be socialized).

The ten puppies from two litters that were equal in size but from bitches of different breeds – German shepherd and Doberman, were tested individually. After the test each puppy was returned immediately to its mother and its littermates. The study was performed in an enclosed place, unfamiliar to the dog, different from the premises where they were reared. The gender of tested dogs was not important with regard to the application of this test (12) and that is why it was not specified.

The microclimatic parameters: temperature (T°), relative humidity of the air (R, %), velocity of the air motion (V, m/s), harmful gases, were measured by routine methods. For convenience, the dogs were numbered as follows: litter A (No. No. 1, 2, 3, 4 and 5) and litter B (No. No. 6, 7, 8, 9 and 10).

RESULTS AND DISCUSSION

Taking into consideration the fact that the deviations from the normal microclimatic conditions have an impact on the behaviour of puppies (13), our study showed that they corresponded to veterinary hygienic norms in both areas: where the animals lived and where the tests were carried out: $T^{\circ} = 21^{\circ}\text{C}$; R % = 65%, V = 10 m/s. The content of NH_3 in the air was 0.0001 mg/l. Neither CO_2 nor H_2S was observed.

The normal values of microclimatic parameters suggested that any environmental influence of this type on the behaviour manifested by puppies should be excluded in tests aimed at determining the extent of their socialization.

The results (*Table 1*) were interesting as they allowed performing a comparative description of the extent of socialization of studied canine breeds – German shepherd and Doberman.

Table 1. Behaviour of tested puppies.

Test of Campbell	German shepherd					Doberman				
	1	2	3	4	5	6	7	8	9	10
Part I	A	D	D	C	D	E	D	D	E	B
Part II	B	D	D	D	C	B	D	D	B	B
Part III	A	C	C	C	D	E	C	C	B	B
Part IV	A	D	D	D	D	B	D	D	E	E
Sum of parts I-IV	3A+1B	3D+1C	3D+1C	2C+2D	3D+1C	2E+2B	3D+1C	3D+1C	2B+2E	3B+1E

The table shows that the pattern of behaviour of the five German shepherd puppies proved a higher socialization level compared to Doberman puppies. Only one puppy of the former breed belonged to type A (3A+1B), i.e. to aggressive animals that are hardly adapted to the environment and needed a prolonged training. The puppies Nos. 2, 3, and 5 were representatives of type D (3D+1C) – obedient dogs, that obey the master, are docile, easy to

train and therefore, preferred by owners. The German shepherd puppy with No. 4 (2C+2D) is an interesting type, belonging at the same time to type C (calm dogs) and type D (obedient dogs). It could not be said whether one or the other type of behaviour prevailed, but a puppy of this type should be for sure easily trained to obey. If summarized, the data suggested that only 20% of tested German shepherd puppies would be socialized with

difficulty. The other 80% should not experience any problems with the adaptation to the environment.

The situation with Doberman puppies was different. The puppies with Nos. 6 and 9 belonged at an equal extent to types B and E, i.e. they would hardly become accustomed to the environment. A prolonged training would therefore be necessary. The puppies with Nos. 7 and 8 belonged rather to type D (obedient and easy to socialize) than to the calm type C. In this instance, these puppies would exhibit difficulties in their adaptation to the surroundings. The puppy with No. 10 belonged more to the unpredictable type B than to the difficult for socialization type E. The prolonged and intense training would be strictly necessary in this case. For the Doberman breed, 40% of tested puppies should be easily accustomed to their environment and the other 60% would require more efforts and work in order to attain the desired level of development and socialization.

These results were somewhat unexpected for us, because according to some (14), both studied breeds are characterized with ability for fast and easy adaptation to the environment. They are intelligent, brave, obedient, vigilant, workers and with an excellent olfaction. These traits make them perfect for detection of tracks, searching and guarding. It is reported (14) that Dobermans were less courageous and more emotional than German shepherds. That statement could probably explain our results showing that German shepherd dogs were more easily socialized than Dobermans. This should be taken into consideration when deciding to keep dogs from these two breeds, because as already stated, the way of socialization is essential for the compound behaviour of the adult dog.

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