

CHAPTER 3

HUMAN-ANIMAL INTERACTION IN HUMAN-HUMAN CONTEXT

3.1 Introduction

One of the fundamental characteristics of life is inherent mobility. Such motion, even if it is only growth, implies an effect on the environment of an organism. Without inherent mobility plus its contingent effects, an organism is dead. The further living organisms are developed, the greater meaning is attached to this mobility-and-effect in terms of behavioural patterns. In various organisms action-effect behaviour has developed into action-reaction behaviour, which is used mainly for survival. Remember that all organisms, including plants, are part of this argument, which is based on evolutionary principles. Survival has to do with the collection of food for energy (for continuing action or mobility) as well as reproduction. Survival activities are thus not only on the individual level, but also on the species level of continuous existence. This leads to competition in the environment, with accompanying self-defence or expansion with regard to territory, which includes resources, shelter and security. The effect of competition could be intraspecies, interspecies or may even include an effect on the non-biological environment. All behaviour up to this point is described as selfish and agonistic, and includes food chains and parasitism.⁹

3.2 Evolution of interaction behaviour

Biology, however, seems to be more than that, because it tends to organise in complicated self-organising systems where the simple cause-and-effect of competition is not the only law of nature. In other words, the so-called "law of the jungle", where only the strongest survives, appears not to be the whole truth. Organisms can also organise into cooperative systems, such as various types of symbioses and dynamic equilibriums between

organisms and their environment in terms of the use of resources and energy and the maintenance of the environment. Organisms can thus be instrumental in mutual ecological order while tolerance becomes another characteristic of biology. From an evolutionary point of view action (mobility) is followed by reaction (effects of mobility), but it can also develop into beneficial interaction (complementary mobility).⁹

In this regard Lewontin⁵⁹ argued that, on the micro-levels, it takes more than DNA to make a living organism, because environmental and genetic variations are not independent pathways. Genes affect how sensitive an organism is to the environment and environment affects how relevant the organism's genetic differences may be. The interplay between organism and environment is thus indissoluble. Genetic and environmental effects can be separated statistically only in a particular population of organisms at a particular time with a particular set of specified environments. Changes can occur in environments as well as in genes, which can be switched on or off.

"Modern biology has become completely committed to the view that organisms are nothing but the battle grounds between the outside forces and the inside forces", however, "just as there is no organism without an environment, there is no environment without an organism. Organisms do not experience environments. They create them. They construct their own environments out of the bits and pieces of the physical and biological world and they do so by their activities."⁵⁹

On a macro-level, Fraser⁶⁰ stated that the special bonding between animals, and between people and animals, is now universally accepted as a natural phenomenon. The relationships in pair bond associations are now recognised to be a form of symbiosis, although "mutualism" is now the preferred term for

this associative state. Such social organisations that develop among animals are observed by ethologists to add substantially to the animal's integration with its circumstances. The relationship between mankind and animals has become highlighted, in its social form, in the human-animal arrangements that are found to be so attractive and beneficial to people. The growth of respect for social relationships between people and animals is overdue. Surprising bonds have been documented between pairs of animals of different species. That such social pairings were of mutual benefit in creating alliances was a behavioural phenomenon there to be appreciated, but in fact overlooked. Without the opportunity to associate with individuals of their own species it is clear that both mankind and animals can create satisfactory alternative associations with individuals of other species. It may be that those animals recognised as the domestic species have the greatest capacity for alternative associations, but many other species have this capability and offer themselves to mankind in forms of special association. In all of this it is now clear that a wealth of associations awaits us.

The desire to establish an association is one of the principal behavioural characteristics of all species of animals. The motivation inherent in this is sufficiently specific and strong to deserve special recognition. One could give this an ethological title such as socio-tropism ("tropic" meaning the state of being directed or turned toward a specific stimulus - in these instances the stimulus is an associative opportunity). It may be that this factor is fundamental and inherent in many of the phenomena being considered here. Undoubtedly there is great social affinity inherent in the domestic species that stems from a root in behavioural organisation.⁶⁰

Affiliative motivation is evident everywhere within species and has such a priority in behaviour that it clearly has an important place in the animal's most basic behavioural programme. It is reasonable to presume that there must be commanding neural organisations, set in place in epigenesis for this purpose. Many people often feel a strong desire for an affiliation with animals to

serve them as social complements. It could be said that pets have owed their use and their existence to this desire from early times. Such complementary arrangements reveal to us that even persons who do not apparently require alleviation of physical or other problems can receive intangible psychological support from the enduring company of a given animal. In these arrangements the alliance is so intimate that the pet shares the home of its owner. The "child-dog dyad", now being studied scientifically, is one society has viewed with benign appreciation from early times. In ethology it is recognised that motivation is directed towards consummation; the affiliative effort is seen to have its achievement in the establishment of bonds. These are mutually supported forms of integration which, among other features, generally take the form of close physical contact that is maintained on a continuing basis. The social behaviour of animals is much more than simple associative activities. Starting with the natural objective of species' self-interest and perpetuation, major systems of associative behaviour are supported by numerous components of behaviour. These components represent tactics produced as variable modes. All of this is structured so as to combine flexibility with imperative activities in a social environment.⁶⁰

The structure of social behaviour consists of the following:

- Objective: To maintain a population by dynamic association within the species.
- Strategies: Systematic associative behaviour.
- Tactics: Components of strategies as variable modes of behaviour.

In the breakdown of social strategies and tactics, it is evident that the entire range of social behaviour is extensive in scope. This scope is greatly affected by learning in general, and by the effects of learning experience in particular. There is probably great scope for improving the social competence of many animals by en-

riching their early experiences. Such social capability would probably make these animals better equipped biologically.⁶⁰

Fraser⁶⁰ concluded that the most obvious feature in social behaviour could be termed "mutual contiguity". This state of close contact has its motivation and is preserved, not only in pair bonds, but also in the elaborate social tactics involving triple or multiple bonds. Among animals that have social status established in a hierarchical system, associative partnerships can be variously vertical and collateral in design. Whatever the specific tactic employed in these arrangements, contiguity is apparently the salient feature given priority. If special association between mankind and animals is to be recognised properly, it should be seen as a vital shock absorber in times and instances of social difficulty. Human-animal affiliations have created growing international awareness that behaviour, in the form of interactions between individuals, lends support to life.

The possible, and maybe accidental, advantages which may follow from positive interaction, create a need which seeks to be fulfilled repeatedly. In this way, beneficial interaction becomes part of the organism's basic needs and it stretches much further than mere mobility with effect and competition, because the behaviour is now an expression of give and take. The aim is to strive for a mutual benefit in the same ecological milieu and this positive interaction on an intraspecies level forms the basis of self-organising social systems. In higher order animals this behaviour as alluded to above, gains greater meaning because it is based not only on physiological needs, but also on emotional needs. In social systems, such a basic emotional need can be described as a need for attention.

"Humans are the most social of all the vertebrates. As such, we tend to assume that animals living in large groups are more advanced than those living solitary lives. Recent research tends to rebut that assumption. Whether or not a species lives a soli-

tary or social life depends on its ecology - the resources it needs to survive and reproduce and especially the way such resources are distributed in space and time. Social living has inevitable and occasional costs, as well as common and occasional benefits".⁶¹

Basic needs (physiological or emotional) are sometimes described as instincts. Cohen and Stewart⁶² are of the opinion that basic behaviour is established not only by an interplay between an organism and its own genetics (DNA) and between organism and environment, but also between organisms, a phenomenon which they refer to as cultural influences. Under the heading Cultural Club, they explained:

"Once a species has brains and senses there's another trick it can do. More accurately, the trick develops in tandem with the brain power. It is culture. Culture enables animals to pass survival kits on to their offspring by non-genetic routes. These routes can be far more adaptable than DNA chemistry; by the same token, they are not always stable. Non-genetic transfer between the generations is the rule in the animal kingdom rather than the exception, and primates generally take the trick much further".⁶²

And they continued:

"Compare the two alternatives. Is it more effective, in evolutionary terms, to specify all aspects of behaviour once and for all in DNA code, or to use DNA code to specify flexible brains that can learn, and pass the behavioural information from brain to brain, from generation to generation, bypassing the

genetic biochemistry? Like everything else, the answer to this question depends on context, but sometimes one route may be preferable, sometimes another."⁶²

Although the need for positive interaction already exists in the basic behavioural patterns of many living organisms, attention-need behaviour only becomes clearly identified in advanced and well-developed social systems as a universal emotional need. Attention-seeking behaviour is not a new idea and it is used especially when problem behaviour in man and social animals is described. In order to distinguish between problem behaviour and a normal need, a Latin description is chosen to standardise its use in all languages. The term *attentionis egens* describes the need for attention on a normal, basic emotional level as the prerequisite for successful social interaction, and deviations from the norm could be found on a continuum which stretches from withdrawal from attention on the one side, to a myriad of behavioural patterns aimed at getting excessive attention on the other side. The latter develops because of either a lack of attention or an addiction to attention. Positive interaction is seen as behaviour which is mutually beneficial and negative interaction as behaviour which is harmful or a bad experience to one of the parties.

The previous chapter indicated a number of theories which are based on positive interaction between human and human and these explanations could well support those theories from an evolutionary perspective. Intraspecies social systems are, however, not necessarily closed systems. Such systems can be expanded to be interspecies in nature. One of the marked examples of such an interspecies relationship is that between man and companion animals. The success of human-companion animal interaction is probably mainly based on a two-way fulfilling of *attentionis egens*. Animals suitable for companion animals are most often highly social animals, and if less social species are kept, these animals can still fulfil the need for attention of their human owners. The greater the need for attention or the more social behaviour an animal exhibits, the more successful the

bonding between human and animal can be. When such a beneficial interaction between two social species is set in equilibrium, it can be described as a social symbiotic relationship (mutualism on a social level). In this regard the dog is a prime example of such relationships, because of the long period and the wide distribution (universalism) of human-dog interaction. The dog can truly be seen as a prototype of companion animals.

The fact that attention needs are fulfilled interspecies rather than intraspecies, could possibly be explained on the basis that the two species in such a relationship do not compete for the same physiological needs, such as food. On the contrary, the human provides food, shelter and care, while at the same time the animal can also be used for utility purposes and security. This provides an atmosphere in which the two species can interact positively on the emotional level, because interaction on the physiological level is non-threatening. In this way a positive feedback cycle of need and fulfilment of attention is established.

A literature study on human-animal interaction, from a historical as well as a cross-cultural perspective, indicated that the psychological and emotional aspects of this relationship with the traditional companion animals, the dog and cat, were constantly present. A comparison between communities before 1950 and communities divided in western and non-western societies after 1950, showed in principle the same interaction, although western societies' interaction were more varied and possibly more intense than that of other communities. The choice, namely the year 1950, was based on the recognition of Konrad Lorenz as the father of the field of study now known as human-animal interaction.^{63,64} His books on this subject, *King Solomon's Ring* and *Man meets dog*, appeared in 1952 and 1954.¹

According to historical evidence and prehistoric speculations, it is believed that the social symbiotic relationship between man and dogs and cats developed without any coercion from the human's side.^{65,66} This means that domestication was a natural process and not a unilateral decision by humans to catch dogs

and cats to tame them for the benefit of man only. It is thus possible to explain the unforced, natural way of establishing a social symbiotic relationship between humans and companion animals by well-developed needs for attention, when viewed from a historic point of view. Whether the first step was taken by humans or animals, is of less importance. What is known, is that the interaction between *Homo sapiens* (wise man) and *Canis familiaris* (trustworthy dog) developed into a beneficial (utility) and meaningful (emotional) interaction which has lasted for at least 12 000 years.⁶⁷ It seems that the way new relationships develop today, does not differ much from the earliest information on human-companion animal relationships. If the first encounters were accidental, reinforced by rewards, encounters today can still be described in the same way. Even if such encounters are seen as a system with some teleological plan leading to such a relationship, this could also be true for today's interaction. The purpose is not to analyse the historic cause and effect of the interaction, but rather to understand the success in terms of the mechanism (*attentionis egens*) of the interaction which has not altered since the history of man-companion animal was first recorded.

3.3 Attention needs and therapy

The therapeutic role of companion animals is mainly established among the "weaker" people in society, such as physically and mentally handicapped people, socially maladapted persons, chronically ill patients, the lonely as in long-term social deprivation, emotionally disturbed persons, prisoners, substance-dependent addicts, the aged and children. There is not necessarily something wrong with the latter two categories, but they are included because these persons are often not part of the mainstream community activities as experienced by the economically active adult population. It means that all the above-mentioned persons may have an additional need for attention owing to their particular positions (peripheral to the mainstream) in the broader society. In other words, they cannot compete on an equal basis for attention among healthy, adult people, because of

their place in society in relation to the nucleus of activities. Obviously this picture is not black and white, or a matter of "them against us", but it rather emphasises the point that, where there is a possible lack of attention, companion animals which can provide attention in a reciprocal way, can be used to assist in therapy. Exceptions can occur: on the one hand so-called healthy, active people may also use animals for fulfilling *attentionis egens* and on the other hand the so-called marginalised people may not need animals to fulfil their needs for attention. What is then proposed, is that the current claims for success where animals are used to assist in therapy are mainly based on the fulfilment of *attentionis egens* and that the success is reinforced because of a positive feedback system.

In an article published in *Rehabilitation in South Africa*, Odenaal⁶⁸ mentioned the advantages of animal-facilitated therapy as reported in the literature: relief of loneliness by providing companionship;^{69,70} relief of tension or stress;^{69,71} "other life" can fulfil *attentionis egens* better than non-life (technology);⁷² companion animals are available to provide instant attention;⁷³ they can provide love and friendship and form a bond with people;^{74,75,76,77} the relationship can be dictated by the owner and they can exert control over the interaction;^{78,79} animals can fulfil specific substitute functions such as for parents, children and siblings;^{80,81} and companion animals are often seen as family members;^{82,83,84,85} pets can serve as love objects;^{70,86} they can act as social lubricants;^{78;87;88;89;90} they can be kept as status symbols;^{90,91,92,93} pets can be used as scape goats to redirect negative attention in a triangle situation;^{64,83,94} pets can be used as pretexts to get attention by projecting own problems onto the animal;^{92,95} they can provide occupational therapy by providing physical and emotional support;^{96,97} pets can help with reality therapy;^{87,89,98} companion animals can provide an ego boost for their owners;⁷⁶ pets can be objects of care and compassion (animal welfare);^{70,92,95} and pets can absorb negative behaviour from people without retaliation.

It was also indicated, however, that companion animals are not for everybody, because the need for attention could be fulfilled by other means that people prefer, previous negative experiences with animals and there could be practical limitations in keeping animals.⁶⁸

3.5 Discussion

Categorising aspects of behaviour always creates problems. It is obvious that some of these "categories" of the advantages of animal-facilitated therapy will overlap. It is also possible to ascribe more attributes to these interaction examples than only attention. However, the aim was to define the positive interaction between humans and animals, as described for animal-facilitated therapy in terms of *attentionis egens*.

As in identified behavioural patterns associated with a need, a great variety of intensity and frequency can be expected. The interaction between human and animal can vary from totally negative (or non-existent) and phobic to an extraordinary (pathological) bonding and attachment. It is proposed that this continuum in all its manifestations is based on the fulfilment of *attentionis egens*, which is normal and healthy but which could also deviate to the extremes of the continuum.

Attentionis egens of social species is usually fulfilled by members of the same species and this is also true for human-human interaction. This was clearly reflected in the interaction theories discussed in Chapter 2. The "categories" of interaction between humans and animals in this chapter, however, confirm the idea that typical positive attention between human and human can be replaced just as well by human-animal interaction. It is in this human-human interaction context that companion animals can truly be viewed as therapeutic agents. The argument can thus be summarised in the following diagram which includes evolutionary, cross-cultural, longitudinal and interspecies interaction explanations as well as reasons for a lack of human-animal interaction (Fig 2.1):

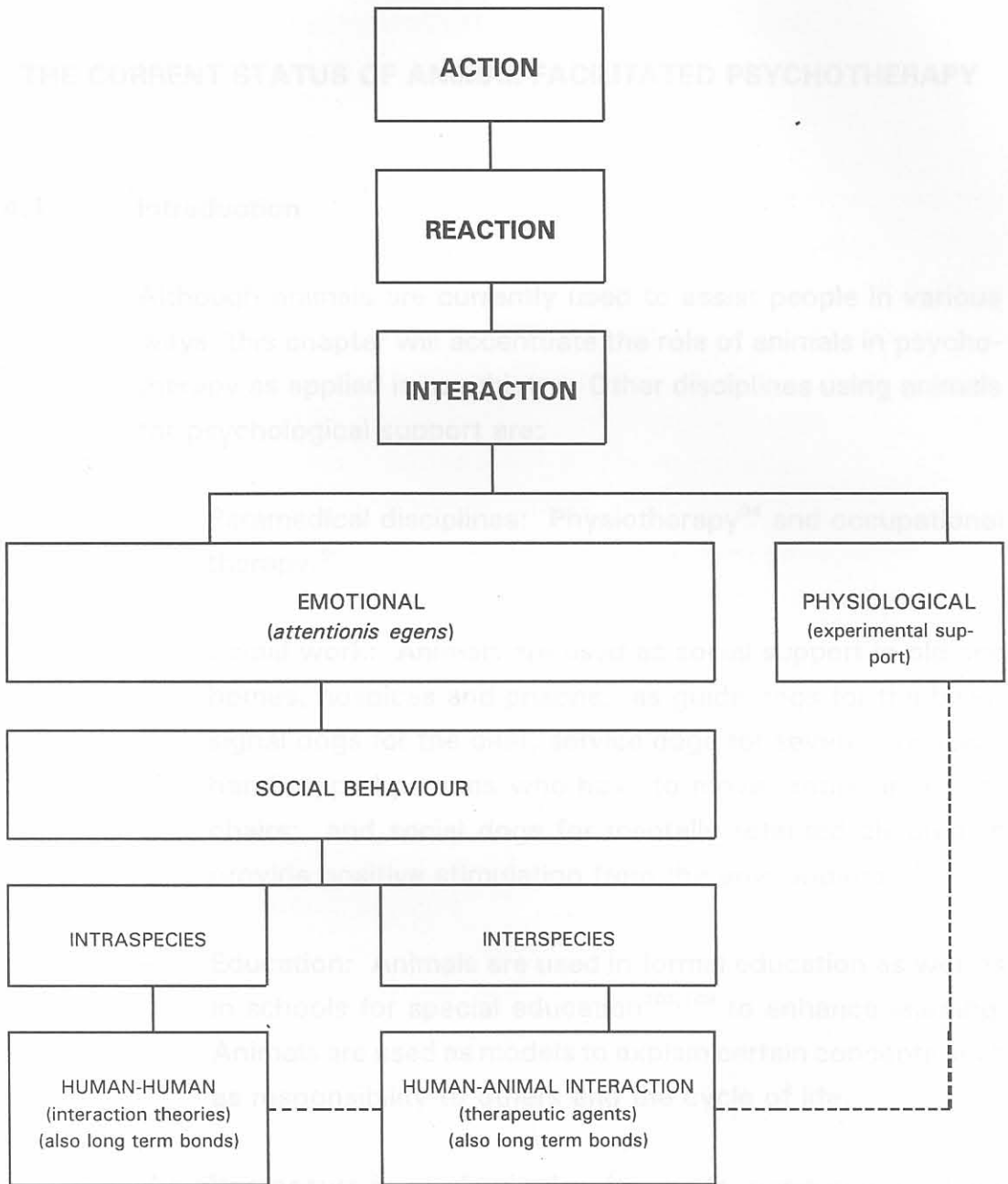


Fig 3.1: Human-animal interaction in human-human context

In the following chapter reports on animal-assisted therapy will be discussed.