



## Module 30

# Human–Animal Interactions

## Lecture Notes

### Slide 1:

This lecture was revised by World Animal Protection scientific advisors in 2012 using updates provided by Dr Caroline Hewson.

### Slide 2:

Our goal today is to obtain an overview of how human interactions with animals affect their welfare. We are particularly concerned with the behaviours and attitudes of the caregivers we will encounter in veterinary clinical work, and with our own interactions with our patients.

We will start with a brief introduction to why humans bond with and develop relationships with the animals under our care. This is a huge interdisciplinary academic field, with its own scholarly journals such as *Anthrozoos* and *Society and Animals*, as well as publications in veterinary and animal welfare science journals. However, we only have time to look at it very briefly, by way of background.

Then we will move on to how our interactions with animals can affect their welfare. This is another area of academic concern, and to illustrate the principles that are emerging from that we will review some of the research on each of the following groups of animals:

- farm animals
- horses (draught and leisure)
- companion animals.

We will end by talking about animal cruelty, which includes abuse and neglect.

### Slide 3:

We start with some background.

Domestication is defined as “that process by which a population of animals becomes adapted to man and to the captive environment by some combination of genetic changes occurring over generations and environmentally-induced developmental events recurring during each generation” (Price, 2002). The process of domestication has involved the development of long-term mutually beneficial relationships between humans and the animals concerned. In some

cases this has protected the animals from predators and provided food and shelter, and in return we have used them as companions, utility animals or both. By utility animals, we mean animals we keep for our own practical purposes such as for food production, work and research.

Note that these two broad categories of use overlap; e.g. around the world, many working animals are also companions. Dogs are a particular example of this, being used for hunting and herding, while also being trusted companions.

The types of emotional relationship people have with utility animals vary. Modules 4 and 12 look at how this ‘ancient contract’ between animals and people is the basis for some deontological (obligation-based) ethics of animal use.

### Slide 4:

Around the world, many people have and continue to form some degree of emotional bond with animals. Two of the prevalent hypotheses about why we form this attachment are:

1. **Attachment theory** – this is based on the fact that we are a social species with associated emotions, and it assumes that we therefore naturally want to form emotional bonds with non-human animals as well as with each other.
2. **Biophilia** – based on a love of living beings. In that school of thought, urban settings in particular separate us from nature and we cope with this feeling of disconnection, in part, by keeping animals as companions.

In the case of animals we keep as companions, there has been a growing emphasis on the importance of the emotional bond, and this is referred to as the ‘human–animal bond’ or HAB. There is no clear definition of the HAB, apart from its being based on emotional attachment to, mainly, companion animals. However, the HAB is widely studied because of its perceived benefit to humans. We will return to the animal welfare implications of the HAB later.

For now, however, note that farmers and those who work with animals in research may also have a strong emotional bond with their animals. This is less well recognised and less widely studied. Nevertheless, for example, following outbreaks of foot and mouth disease in the UK and the Netherlands, sociologists interviewed farmers in both countries and the farmers spoke of their distress at culling their livestock because the animals were “like friends” and because “the government almost completely denied that farmers have bonds with their animals”.

The relative lack of discussion of any bond that handlers may feel with utility animals brings us to our next point, which is that we may feel conflicted about our relationship with animals because we use them in different ways that sometimes involve killing them or causing them pain or distress. This inner conflict is termed ‘cognitive dissonance’, and we shall look at that now.

## Slide 5:

Cognitive dissonance theory states that if we hold conflicting or incompatible views, this causes us to experience unpleasant emotions, and that we will change our behaviour or our attitudes in order to overcome this.

In our relationship with animals, we may tend to exhibit behaviours or form attitudes/beliefs about animals that overcome or avoid the conflict that arises from having both affectionate and utilitarian relationships with them, as the examples below demonstrate.

- In some cultures, there are rituals before hunting which are intended to win the approval of the hunted species. In many cultures there are strict rules about which animals may be killed and how, e.g. a rule that forbids hunting pets.
- In many cultures there are designated butchers so that we, the consumers, do not have to kill the animals we eat. Also, in many farming systems around the world, from modern to subsistence, women are primarily responsible for rearing the animals while men are responsible for taking them to slaughter, or for killing them on the farm.

The people in these different roles typically have differing attitudes towards animals. In the case of farming, the term 'sentient commodities' has been suggested to describe how farmers and others perceive their animals. Some research indicates that farmers who are involved with breeding livestock feel both concern and attachment to the animals as individuals, with strong emotional bonds. This was borne out by the distress experienced by farmers following foot and mouth disease in their herds, as we saw earlier.

In contrast, those working in the more commercial part of farming, such as dealers and those working on large intensive farms or at slaughterhouses, are not attached to the animals and may see the animals purely as a commodity without regard to their sentience. This does not mean that those people will treat the animals badly: they may follow whatever high standards of welfare are set, but for non-emotional reasons such as income, personal pride, and a desire to follow rules. However, their detachment from animals may also make them indifferent to whether their behaviour frightens or hurts the animals.

## Slide 6:

Stepping back from the question of emotional attachment and cognitive dissonance, we can say that, overall, human interactions with animals are influenced by some combination of the following factors.

- **Psychological factors** e.g. our attitudes, personality, past experience, cognitive dissonance, empathy and mood. Psychological factors have received the most attention in the research literature.
- **Sociological factors** are also important. Examples are the handler's job conditions, such as salary and time pressure, and his or her personal circumstance such as the state of relationships with family, boss or co-workers.

- **Physical factors** are likely to be significant too as they contribute to the context of each encounter with the animals. That is, the design of their housing, soundproofing, condition of the flooring, etc. Uneven stony farm tracks may predispose dairy cattle to lameness. The farm workers may dislike examining the cows' feet because of time pressures and poor handling facilities. So a combination of the farm's infrastructure and the demands of other work around the farm may influence the workers' attitude towards lameness in the cows: they may tend to be impatient with lame animals, or to ignore the early signs of lameness.
- **Anthropocentrism** is a further point, i.e. interpreting reality in terms of human experience and values, and attributing human feelings to animals. This is more apparent in the relationship that people have with their pets, and it can contribute to common welfare problems that you encounter in small animal practice, as we will see later on.

### Slide 7:

Knowing that a combination of factors affect how we behave towards animals, we now turn to their point of view.

First, animals' experience of humans and their perception of us depends on their early experience of our behaviour towards them. This is in turn modified by how often we interact with them in their first days and weeks of life, and whether those interactions cause pain or are positive. The presence of the dam may also modify this.

Animals' later experience of us is also important: even if animals are reared with many positive human interactions, if they are then sold to others who interact with them negatively, their welfare may suffer which may in turn alter their perception of humans.

Animals' genetics also affect their natural levels of curiosity and fearfulness, which can affect how they experience our interactions with them.

Overall, however, there is a shared history of interactions between animal and caregiver. This enables them to develop a relationship and make predictions about the other's behaviours. However, if an animal only has one or two encounters with a human being (e.g. with you, during a veterinary visit), there is little or no relationship and it may be hard for the animal to predict your behaviour. Moreover, interactions with veterinarians can be unpleasant for animals, and therefore leave a negative memory, so if the animals do have expectations, they may well be anticipating an unpleasant or even painful interaction. That is one of the main reasons why you may find some of your patients difficult to handle and examine.

### Slide 8:

Here, we continue to discuss how animals perceive humans. Humans represent sensory input for animals: they see us, smell us, hear us and feel our touch, which may be rough or gentle. Note that all our domestic species have very different visual capacities from us: unlike us, they have little binocular vision. However, they generally have much more developed auditory and olfactory capacities, so they smell and hear us very acutely.

As we approach animals and interact with them, all that sensory input is processed by the animal's brain, in light of any memory of other experiences with us. Note that research indicates that animals can discriminate between people and remember them.

This processing creates emotions which result in whether animals perceive us as a positive, neutral or negative influence.

Animals who view an individual (or humans generally) in a **positive** way show low fear and high confidence with them. This is achieved if a handler has frequent, calm, friendly interactions with the animals. This is typical of farms where the stockperson walks through the pens or the field at least once a day, calmly and gently. It is also typical for many companion animals.

Other animals may perceive a person as **neutral**: they have low fear but they avoid interacting with the person. This situation probably arises when the handler has not frightened or hurt the animal, but also has not had many very positive interactions. This is common in households where one family member does not like animals and avoids contact with the pet. This means the animal comes to no harm but feels no positivity or affection towards the distant owner. It is also common on many farms where time pressures and other factors mean that the stockperson does not have daily direct contact with the animals. It may also be the case at busy animal shelters, and in laboratory facilities.

The third category is **negative**: these animals are afraid of the person concerned. This situation occurs when interactions are mainly negative. It is a risk of very large commercial farms, animals in laboratories, extensively farmed animals, and in animals presented to you as the vet. Animals who fear humans are a concern both because of what this may indicate about their welfare, and because frightened animals can injure their owners, you, the veterinarian, and themselves.

## Slide 9:

Animals who are afraid of humans may experience reduced welfare in each of the three aspects of welfare.

- Negative feelings, e.g. fear. This is a concern if it is an ongoing or daily emotional state and affects the general mental state of the animal.
- Reduced physical functioning, e.g. reduced immunity; reduced productivity and meat quality.
- Inhibition of the performance of behaviours that are important to the animal – these may be inhibited if chronic vigilance occurs due to fear of human handling.

Conversely, animals who trust humans and have largely positive experiences with them may have increased welfare. Research has tended to focus on how negative interactions can reduce welfare, but it has also shown that positive interactions can contribute to animals enjoying a good life, for example, by being played with, stroked or given food treats.

## Slide 10:

As part of our overview, we should note that it is not easy to assess animals' fear of the handler, especially when you are auditing a facility and looking for improvement in the handler's behaviour and its effect on the animals.

For example, commonly used measures to assess how the animals perceive humans are:

- how closely the animal will approach a stationary person
- how long it takes for the animal to approach
- how close the animal will allow a person to come to them.

However, those behaviours could also reflect factors such as curiosity, or the fact that the person has food.

Other useful measures include looking at the handler and the particular situation, including:

- the handler's attitude to routine husbandry tasks
- how often they hit the animals during a routine handling procedure
- welfare outcomes such as growth rate or how much an animal struggles, vocalises or falls during a routine handling procedure.

These measures need to be used with caution or in conjunction with other indicators. There is always the possibility that when you are auditing a facility the people working there may not show you their true routine behaviour, and using just one parameter (such as growth rate or vocalisation) may give a limited evaluation as different species, and different animals within a species, have different ways of expressing good or bad welfare.

## Slide 11:

To sum up so far: domestication has led to animals being dependent on us. We generally have some degree of emotional bond with those animals, especially if we interact with them every day as caregivers. This bond can contribute to cognitive dissonance if we also use the animals, and especially if we kill them.

Psychological factors, and other factors, affect how we behave towards animals.

From the animal's point of view, our behaviour creates sensory input. They may therefore perceive a given person as positive, neutral or negative. Where animals perceive a person as negative, they may often feel fearful and vigilant, and this is a welfare concern as well as a security concern. Different indicators and measures can be used to assess animals' perception of humans.

Now that you have this very general overview, we shall consider particular examples of the effect of human–animal interactions on welfare, starting with farm animals.

## Slide 12:

Modules 2 and 9 look at how the stockperson is one of the ‘welfare inputs’ or resources that affects farm animals’ experience of their lives on the farm, during transport, at markets and at the abattoir.

Research in this area has tended to be psychological, concerning the stockperson’s attitudes, empathy and personality. The general model that has emerged is that our attitudes towards animals affect our behaviour which, in turn affects animals’ fear of us.

This can be a vicious circle: if our attitudes to animals cause us to behave in ways that frighten them, their behaviour will make them more difficult to handle, making our attitudes towards them worse, causing them more fear, and so on.

Conversely, a positive attitude towards animals is likely to lead to calm behaviours in us and, consequently, in them, which will in turn reinforce positive attitudes towards them.

## Slide 13:

A pertinent theory from applied psychology that has been studied in this context is the theory of planned behaviour. This predicts that our behaviour is a result of three elements:

- our **attitude** towards the behaviour concerned, e.g. ‘Rounding up animals is frustrating and takes a long time’
- our **belief** that we can perform the behaviour, e.g. ‘No matter what you do, it is impossible to round up animals without hitting some of them and having some of them run away’
- the **opinions** of people who are important to us, e.g. ‘Other farmers use electric goads to keep animals moving, and I would look weak if I asked my staff not to use goads, or not to hit the animals.’

These components demonstrate how complex human behaviour is, and why changing the behaviour of your clients, or the staff in your clinic relies on you understanding their motivations.

In addition to all this, a person’s behaviour may also depend on the culture of the farm or clinic as a whole, and on external unplanned circumstances such as his or her own health, mood, personal relationships, etc.

## Slide 14:

We shall now look at some examples of how handling of animals affects their welfare, starting with dairy farming. One survey of Norwegian dairy farmers, who used free-stall housing, showed that the farmers who demonstrated higher levels of empathy towards painful conditions in cows and calves tended to have lower levels of carpus lesions in their cows. This was a survey, not a live on-farm study. However, the data suggested that the farmers’ attitude and concern about animal pain was reflected in the better welfare of their cows generally.

Other examples involve several of the common parameters of a successful and productive dairy farm: milk letdown; the time it takes to conceive the next calf; and the somatic cell count. Rushen & De Passillé (2010) reviewed a number of studies where they indicated that fear in cows accounted for 16–30 per cent of the difference in total milk production between high-producing and low-producing herds. In one study, the presence of someone who had previously handled the cows roughly (hitting, shouting, using an electric goad) caused cows to withhold an average of 3.6 kg of milk due to stress, compared to only 2.1 kg of milk for cows who had been handled gently and were in the presence of that gentle handler. Note that those handlers were simply present during the milking, but not actually performing the milking.

In another study, cows' fear of a rough handler was estimated as being responsible for 14 per cent of the difference in conception rates between farms.

A third study found fear of the handler to be associated with higher somatic cell counts in the milk. This suggests that the cows' fear could make them more susceptible to mastitis. Depending on the cut-off number for somatic cell count at the local dairy, this aspect of rough handling could also affect the commercial value of the milk.

### Slide 15:

Positive handling leads to positive emotions: stroking cows on the neck, where they might naturally groom each other, is associated with a reduction in their heart rate and cortisol. Also positive handling during rectal palpation results in cows being less restless during that procedure, making veterinary work safer and easier, as well as reducing the cows' stress.

You can see from these examples that gentle handling is generally a win–win approach for animals and handlers alike: the animals' welfare is improved, and the handler's working life and safety and farm income are all better than if the animals are handled roughly.

### Slide 16:

Next we look at some examples of studies on pigs.

As the figures on the slide indicate, gentle handling is associated with higher growth rates in baby pigs and in older growing pigs, and with higher pregnancy rates in gilts who are mated during their second oestrus.

A survey of the attitudes of pig farmers in Finland towards improving animal welfare illustrated elements of the theory of planned behaviour that we mentioned earlier (Kauppinen et al., 2012). There, farmers were estimated to have an extra piglet per sow per year if they:

- valued humane treatment
- believed that they could achieve this without harming their own wellbeing (e.g. they would still have time for other tasks)
- valued the advice of experts such as their vet and the researchers.



These data do not tell us that the piglets necessarily had a good experience of their lives from birth to weaning, only that they survived. Also, it was not a cause-and-effect study, only a survey. However, it supports the findings of on-farm research in different countries that demonstrates better production outcomes for farmers who have a positive attitude towards their pigs, and consequently handle them gently and have frequent positive interactions with them.

### Slide 17:

We now move on to how handling at the abattoir affects animal welfare, an area that has not been researched as much as on-farm handling. However, the available data indicate: first, that rough handling increases animals' stress levels as measured by plasma cortisol, behaviour and meat quality; and second, the attitudes and empathy of the staff at the abattoir are correlated with their behaviour towards the animals. For example, a study of abattoirs for cattle and sheep in Australia (Coleman et al., 2012) found that negative handling techniques such as shouting at the animals and prodding them with an electric goad correlated with the handlers' sense that they were under time pressure and did not have a choice about how they moved the animals.

Solutions to rough handling are discussed on the next slide.

### Slide 18:

The solutions to rough handling techniques are outlined below and can result in a win-win for both animals and people.

With this in mind, ways to help to improve handling on the farm and at the abattoir include improving the facilities (a) in accordance with animals' sensory capacities and (b) so that the workers are not under stress from their environment. That way, the handlers will be less likely to resort to being rough with the animals. For example:

- move animals in small groups rather than one big group
- ensure floors are even and that there is no light falling across the animals' path creating areas of brightness and shadow
- if the animals are being moved down a chute into a restrainer, ensure that the doors are well oiled and easy to operate.

We can also look at improving working conditions. For example:

- adjusting the line speed at the abattoir, so workers do not feel under excessive pressure to keep animals moving through the system and therefore do not shout at or harass them
- paying workers a premium for higher production associated with humane handling, e.g. for delivering broilers for slaughter without broken wings

- setting standards that might include no whistling, shouting or hitting, not carrying an electric goad, and not using the goad on more than 5 per cent of animals; auditing these standards by measuring aspects of handling such as the number of animals vocalising when restrained, or the number of animals prodded with a goad
- training personnel, and having refresher training. Various schemes are being developed and adapted around the world for use in different contexts. Training is more than simply telling people how to behave – it involves cognitive approaches which enable workers to understand and change their underlying attitudes, and prepared them for how others may regard them because of this change. Examples include the widespread training of slaughter personnel in some South American countries and Australia’s ‘Professional Handling of Pigs’ programme.

A further point for consideration is the selection of the personnel working with animals. Research is needed country by country so that appropriate selection tools are used. For example, in Australia, where much of this research has been done, studies looked at measures of motivation and of general willingness to take responsibility, follow instructions and show commitment, as well as narrower measures of attitudes towards pigs.

This broader selection approach increases the likelihood of employing staff who not only have positive attitudes and behaviours towards animals, but who are motivated by their work and likely to do it well.

### Slide 19:

Next, we look briefly at the effect of human–animal interactions on horses’ welfare, as reviewed by Hausberger et al. (2008). First, we consider horses used for leisure and entertainments such as racing.

Data on the occurrence of injuries to humans suggest that the frequency and number of interactions between horse and handler affect human injuries more than the person’s competence *per se*. This suggests that people who handle horses (and the research included equine veterinarians) may not be sufficiently aware of how their behaviours may frighten horses.

Two examples where traditional interactions have been shown to cause fear in horses are:

- forced handling of young foals in an attempt to make them accustomed to people from an early age. Even though the methods may be gentle, if foals are restrained against their will, they are likely to be frightened of people as they grow older
- the range of traditional training and riding methods used in leisure horses, many of which rely on punishment, e.g. the rider hitting the horse or exerting forceful pressure through the reins or other harness when the horse does something ‘wrong’.

As a species, the horse’s social behaviours are now well described, and it is being recommended that we learn to train, ride and interact with them in ways that complement their natural social behaviour. Clearly, riding lies outside horses’ natural behaviour, but is well

tolerated. The point is that many interactions with horses are based on anthropocentric ideas rather than learning theory, ethology and the horse's point of view.

It is not clear what the attitudes and other driving factors are for human behaviour towards leisure horses, so there are no simple recommendations to give (such as we just saw with farm animals). However, the same principles apply, e.g. considering the horses' sensory abilities. Research to help us understand the driving factors for human behaviour could help to reduce the risk of negative interactions with leisure horses.

## Slide 20:

Research has already demonstrated the value of positive human–horse interactions for both sides.

In one study (Sankey et al., 2010), 23 yearlings were taught to remain immobile in response to a vocal command and then to accept various handling or veterinary procedures.

Following random assignment, some were trained with a food reward while the others did not have any reward during training (but no punishment was used). Training took place for five minutes per day, five days a week. The yearling trained with food took significantly less time to complete their learning: 3.75 hours vs. 5.2 hours.

The yearlings then had no contact with people for six months. When they were re-tested, the animals trained with food approached the researcher much more readily, and also approached a stranger readily. In contrast, it took the control horses approximately four times longer to approach either their trainer or the stranger.

Some horses in each group remembered the command. Of these, the ones who were trained with food stayed immobile for significantly longer (55 seconds vs. 38 seconds) than the others, and more of them remembered the other procedures they had learned, such as allowing their feet to be picked up.

This was a small study, but it supports the idea that training horses with food helps them to learn quickly and to remember what they have learned. Also, the process seems to have created positive memories of their human trainers, which they generalised to strangers.

## Slide 21:

In the case of the many working horses and other working equids around the world, the published research focuses primarily on the prevalence of physical welfare problems, but has included some assessment of fearfulness in the animals.

For example, a survey of 10,843 working equids in nine countries (Burn et al., 2010), found that aggression was relatively rare (typically less than 5 per cent) and was most common in equids working in urban settings, presumably a sign of fear.

In an earlier study of 4, 889 working equids in five countries (Pritchard et al., 2005), 26% of horses, 30% of mules, and 44% of donkeys showed avoidance behaviour when the researchers approached, and this was thought to reflect fear of people.

In both studies there were very high levels of lameness and skin lesions. As those conditions are painful, it seems likely that the animals would not work as hard as some owners might want or need them to, which could create a negative attitude in the owners and give rise to rough handling and consequent fear in the animals. However, neither study assessed the animals' response to their owners, or the owners' attitudes towards their animals. Therefore it was impossible to draw conclusions about the nature of those interactions, or of the human-animal bond.

Unlike the methods used with stockpeople on intensive farms, the approach to improving how humans handle working equids is based less on top-down training or on cognitive behavioural approaches, and more on bottom-up approaches. In countries such as India and Pakistan, for example, participatory group methods have been used by organisations such as World Animal Protection where groups of local owners take part in guided discussions in order to develop their own understanding of the animals' welfare needs and how to meet them. Typically the focus is on physical functioning, but implies the understanding that the animals can suffer. With this approach, the owners' attitudes are not being addressed directly but the method seems likely to improve the animals' experience of interactions with their owners.

## Slide 22:

We now move on to how our interactions with companion animals may affect their welfare. By companion animals we mean 'pets', or animals who do not have a primary utility function. However, in many societies animals combine companion and utility functions.

The practice of keeping animals as companions has occurred in most cultures throughout history, and different cultures favour different kinds of animals as companions. Dogs, cats and birds are probably the most common companion animals.

People keep companion animals for many reasons. Two major reasons are shown on the slide;

The first is companionship. Socially interactive animals such as dogs, some cats and rats all offer a strong sense of companionship to their owners. This can be particularly important for isolated, lonely and elderly individuals. In return, the owners have the opportunity to provide care and show affection to their pet. (Many dogs have been bred to retain the domed cranium exhibited by puppies and other young, and it is thought that this makes them resemble a human baby which, at some level, makes owners want to care for them.)

Moreover, some pets retain juvenile traits into adulthood. This is called 'neoteny'. An example is play behaviour in dogs. Neoteny triggers caregiving in human owners.

The second major reason why people may keep a pet is rooted in more material instincts, whereby the animal is objectified. In these cases, the animal is more a source of social standing or intellectual interest than companionship – the species, breed or colour of the animal may make a statement about how the owner views themselves and their position in society.

Animals such as tropical fish, reptiles and amphibians are less socially responsive to human beings than many mammals and birds. Nevertheless, many owners may collect large numbers of them and be passionately interested in their care and natural qualities.

This view of companion animals as ‘objects’ is reflected by their widespread sale in shops, and their being given as gifts to children. Similarly, publications in business and market research literature on the relationship between owners and their pets refers to the degree to which owners interact with their animals and enjoy them as ‘consumption patterns’.

Whatever their reasons for keeping companion animals, many people have some degree of emotional bond with them. We noted in the introduction to this lecture that this called the ‘human–animal bond’ or HAB.

### Slide 23:

The HAB has been widely studied by researchers in the fields of social science, clinical psychology, marketing psychology and medicine. Veterinary schools are also recognising its importance and some have faculty positions dedicated to the subject. To date, most of the research on the HAB has been done in Europe and North America, but studies on the topic are now also underway in Latin American countries.

The HAB has emotional appeal, but note that different studies give conflicting results. In some papers – as with research in any topic – the study design, statistical methods and measures of benefit are not robust, and it can be easy to draw false conclusions. Therefore, although the HAB is widely believed to be very beneficial for people, the benefits are not as universal or clear as is popularly thought.

Nevertheless, we can say that the HAB appears to provide real benefits to some groups of people in a variety of contexts. For example:

- keeping pets or having exposure to them may improve survival and some clinical indicators in patients with cardiovascular diseases. Similarly, the sight of some pets and contact with others may improve apparent happiness in patients with dementia
- keeping a pet can promote human socialisation and improve social functioning in individuals who live alone
- keeping pets in childhood seems to be associated with greater concern for animals (not just pets), especially in adult life. The hypothesis around this may be that people who have been able to form a relationship with a companion animal learn about these animals and understand that they have personalities and feelings; these people will then generalise the idea to other animals, i.e. they will understand that other animals have personalities and are sentient beings. It is not clear if this apparently positive effect is “due to pre-existing differences in the types of family that choose to have companion animals, or the types of children who form bonds with companion animals versus those who do not” (Endenburg & van Lith, 2011). Nevertheless, children who grow up with companion animals tend to have higher self-esteem and empathy to become very socially competent as adults. However, it is not clear whether this increased compassion for animals also extends to increased compassion for humans.

The emotional bond that people form with their companion animals can also be beneficial in veterinary practice. This is often emphasised in discussions about the business aspects of practice. For example, research in America published in 2008 (Lue et al., 2008) suggested that owners with a strong bond to their pets were more likely to follow veterinary recommendations, regardless of cost.

The term ‘bond-centred practice’ is becoming widely used. It implies a veterinary practice that helps to strengthen the bond between the owner and their pet by, for example, helping to prevent illness or undesirable behaviours. At its best, a bond-centred practice respects owners’ needs and wishes, but never loses sight of the obligation to safeguard the welfare of the animals.

Finally, the HAB can benefit humans who are restricted or disabled in some way. For example:

- Animals can provide general comfort and therapy for the sick and some owners take their pets to visit patients in hospital. There are many public health considerations here, as well as the temperament and inclination of the animal. As a vet in practice, you must keep the animal’s needs in mind, even if their owner is keen to participate in one of these voluntary programmes.
- Companion animals may be used in specific therapies for people with a range of disabilities from psychiatric illness to autism; for example, riding programmes for children with cerebral palsy.
- Dogs in particular are used as working assistants for people with specific physical disorders, e.g. guide dogs for people with visual impairments; dogs who can predict seizures; and dogs used to assist people who use wheelchairs with domestic tasks. Strictly speaking, these dogs are utility animals, not companion animals. However, for the purposes of today’s lecture we will group them with companion animals due to the strength of the HAB.

## Slide 24:

Compared to research into the benefits of the HAB for people, there has been relatively little investigation into the welfare costs and benefits to companion animals. The assumption is that a strong emotional bond on the part of the human must mean that the animal has a good life. The American research we just mentioned (Lue et al., 2008) supports that idea, with bonded owners being more likely to make regular veterinary visits with their animal.

Many pet owners describe their pet as being a member of the family. However, this can give rise to anthropocentrism and to treating the animal according to the habits of the human family members, rather than according to his or her species-typical needs. Conversely, a less strong emotional attachment where the pet was not seen as a family member might allow the animal more freedom to roam and more autonomy (i.e. more room to carry out natural behaviours), even if she or he is not taken to the vet for regular health checks.

Some of the biggest welfare problems affecting companion animals when their owner feels a strong emotional bond with them are:

- over-feeding, which causes obesity and secondary physical illnesses such as diabetes mellitus and osteoarthritis
- undesirable behaviours (recognised as an important welfare and practical problem around the world). For example, in a survey of dog owners in Iran, 85.6 per cent of dogs had exhibited specific behavioural problems such as inappropriate elimination, fearfulness and destructive behaviour (Khoshnegah et al., 2011). Undesirable behaviours are the main reason why animals are relinquished to shelters in Western countries (see, e.g., Salman et al., 2000) and increasingly in others too.

Bias in the owner's assessment of his or her animals' quality of life and physical health due to their anthropocentric and uncritical bond can have significant impacts on their welfare. For example, a study of 800 dogs in the USA (Schneider et al., 2012) found that owners who valued the companionship aspect of the HAB tended to give worse health ratings of ill companion dogs than owners of ill dogs who did not value companionship so much. This suggested that owners who are bonded to their pets in this way may over-empathise with their animals and give inaccurate evaluations of their health.

Another study published in 2012 (Packer et al., 2012), surveyed 31 owners of brachycephalic dogs who had been referred to the veterinary school in London, England, for a variety of treatments not necessarily related to their anatomy. All those dogs fitted the criteria for having brachycephalic obstructive airway disease (e.g. 100 per cent snored while asleep; ~60 per cent had breathing difficulties at least once a day during activity). However, although all the owners recognised that brachycephalic breeds can have breathing difficulties, more than half (58 per cent) reported that their own dog did not have an existing or historical breathing problem. Instead, the owners perceived their dogs' stertorous breathing, etc. as normal for the breed and 'not a problem'.

It is not clear how much the owners' misperception was due to the strength of the HAB, as that was not measured. The fact that the owners had been referred to the vet school indicates that they cared very much about their pets; yet they did not recognise an obvious dysfunction in them. It may be that many dogs are not being treated for real breathing problems because the owners perceive those problems as normal (and even healthy) for brachycephalic breeds and vets may not be playing their part in pointing this out to owners.

These points illustrate that owners with a strong HAB are not necessarily knowledgeable about or aware of their animals' true welfare state. As a clinician, it is important to recognise this and to note that we need much more research to understand the interaction between the HAB and the welfare of pets.

## Slide 25:

Before we leave this discussion of how the HAB may affect companion animal welfare, we will look briefly at the case of assistance animals.

Dogs are used in many countries to assist people with disabilities, e.g. vision impaired and blind people, hearing impaired and deaf people, people affected by seizures, wheelchairs users, etc.

Particular welfare concerns with assistance dogs include emphasis on pure-breds, such as Labrador retrievers as guide dogs. This can result in some degree of in-breeding, as the gene pool for pure-bred dogs in any country tends to be relatively restricted. Where inherited deformities do occur (e.g. hip dysplasia), it creates the problem of re-homing those dogs as pets.

In addition, as genetic lines are typically selected for optimum trainability and suitability, handlers can assume that animals who do not respond well enough to training are not genetically suited to the work. They may not realise that the dogs' behaviour could instead reflect poor welfare (because of the training method or adverse early experiences). For example, some organisations may breed assistance dogs in kennels. This can be a very restricted environment, which does not provide all the stimulation needed to maximise their sociability and reduce fearfulness. If the young dogs are then trained using punishment-based methods, this can be very aversive may increase the 'failure' rate, creating more problems for re-homing.

This contrasts with traditional working breeds of farm or hunting dogs, who were bred for their modified predatory behaviours that make them naturally adapted to do the work required. Generally, farmers and handlers do not use punishment or much food reward to train a dog for those purposes. In contrast, assistance dogs have to carry out much more complicated and, for them, unnatural tasks, and punishment is thought to be the most effective training method in some cases, which is very unpleasant for the dog.

Another welfare concern is that once assistance dogs are trained and placed with a person requiring assistance, they may not receive adequate non-working time to exercise outside and relax.

In addition, some of the work that assistance dogs are expected to do is made more demanding because the equipment provided is not suitable. For example, some dogs are used to pull people in wheelchairs that are designed to be pushed from behind, not pulled from the front. The harnesses that dogs must wear and the angles that their bodies make as they lean into the harness in order to pull the chair can strain their musculoskeletal system and create soreness and chafing of the skin.

A final concern is that the people using the dogs do not receive adequate oversight and refresher training.

Moving away from dogs, horses may be used in riding therapy for children or adults who have physical or psychological challenges. Research on 14 horses used in a therapeutic riding programme in America found that "being ridden by physically or psychologically challenged



individuals was no more stressful than being ridden in the same setting by recreational riders” (Kaiser et al., 2006). However, the research suggested that children with behaviour disorders stressed the horses, and that horses should only have limited time with such children each day.

To sum up: as a veterinarian in practice, you may be asked to give advice on the public health aspects of these sorts of assistance programmes, e.g. zoonotic diseases, risk of injury, etc. When doing so, it is important that you also consider the animal welfare aspects of these programmes, and educate your clients about them if necessary.

## Slide 26:

As a vet working in companion animal practice you are likely to encounter all the welfare difficulties that arise (in part) from the bond that owners develop with their pets. Communication with your clients is a core clinical skill that will help you increase compliance with your recommendations, and so maximise your patients’ welfare.

Based on decades of research on physicians, and more recent research on veterinarians in Europe and North America, there seem to be four essential features of effective client communication. The points are listed on the slide; the Welfare Toolbox found on World Animal Protection’s Animal Mosaic website – <http://www.animalmosaic.org/education/tertiary-education/> – explains them in more detail.

Note that it will take practice and self-reflection (ideally including looking back at video-recordings of yourself) as well as on-going training to master communication skills. You cannot learn them simply from the Toolbox. Moreover, styles of communication may vary between countries, depending on issues of culture and so on.

However, the section in the Toolbox provides you with a good starting point. Please refer to it and keep it in mind as you go through your clinical training and into practice.

## Slide 27:

We have covered a lot so far. We started with why humans bond with animals and develop a relationship with them; we then considered some of the many welfare concerns that can arise from that relationship. These include:

- welfare concerns caused by negative attitudes to farm animals, and the resulting fear they experience
- welfare concerns caused by ignorance and uncritical approaches to traditional training (in the case of horses)
- welfare concerns caused by uncritical anthropocentrism in the case of pets and assistance animals.

We will end the lecture by looking at a darker aspect of human–animal relationships, which is animal cruelty.

## Slide 28:

Animal cruelty is a form of interaction with animals that always reduces their welfare. It includes animal abuse and neglect.

There are various definitions of animal abuse. The one you see on the slide states that it is “Behaviour performed by an individual with the deliberate intention of causing harm (i.e. pain, suffering, distress and/or death) to an animal with the understanding that the animal is motivated to avoid that harm.”

This definition encompasses a range of physically and psychologically harmful behaviours directed at an animal. For example, kicking or stabbing the animal, or teasing them severely. In all cases, the animals’ distress is not accidental. Mild teasing is a common form of interaction that may encourage an animal to play; however, the significant point is whether the animal is motivated to avoid it and can then avoid it. If the animal becomes distressed to the point of biting the person, who then uses this as an excuse to beat the animal, the animal’s distress and physical harm are not accidental.

Abuse normally differs from neglect. With neglect, owners may fail to feed or care for their animals – including failing to give them adequate social attention. This means neglect can be defined as failing to provide minimum standards of care. However, those who cause neglect are not typically motivated by causing harm; typically, these owners want to save money, or spend their time in other ways, or because they are ignorant or are overwhelmed by other aspects of their lives.

As a vet, you need to be alert to animal abuse and neglect, as the owners responsible should not be allowed to continue in this way or be excused from their duty of care.

## Slide 29:

Animal abuse is an important concern for three main reasons.

1. It causes avoidable suffering (as does animal neglect).
2. There is evidence that suggests if an animal is being abused in the household, human family members are at increased risk of violence too. Typically, this means children and a female partner, although this is not always the case.
3. Children who see or practise animal abuse are at increased risk of growing up to become violent adults: animal abuse is understood to be part of a cycle of violence that can continue down a family line, causing injury and distress to successive generations of animals, children and adults. The photo shows a sketch drawn during a workshop on equine welfare in Palestine. It shows an owner’s recognition that children copy their parent’s treatment of animals. You may see abused animals in your clinic. As a vet, it is important to know about this link, and to be able to recognise animal abuse.

### Slide 30:

Research continues into why people abuse animals. The research is often collaborative, involving experts in social science, psychology, veterinary medicine, human medicine and law.

This research presents many challenges, because it is often retrospective and frequently relies on the memory of the people who are studied and the validity of their accounts. This means there are different views about why people abuse animals, and about how exactly this is linked to the risk of violence against humans.

We do not have time to discuss these views in detail today. However, briefly, some of the most likely reasons why people abuse animals include:

- the person witnessed or practised animal abuse in childhood. There are different theories about why such a child might then grow up to become violent towards people
- the person grew up in a home where they or their parent experienced domestic violence
- there may be a range of motivations relating to control – such as wanting to control the animal, or to retaliate against a person or control them. The latter is common in the case of domestic violence, where the abuser kills or harms the animals in order to distress the human victim, e.g. the man kills the pet dog in order to threaten the woman or the child

Related to these is the possibility that causing pain, distress and death in an animal may produce a basic dopamine response in the brain that is also seen in predatory species at the time of kill. In terms of survival, it is necessary for predatory animals to kill successfully and to experience that as a rewarding feeling. There is the possibility that, at the neurochemical level, a similar internal reward mechanism operates in people who choose to be cruel to animals.

### Slide 31:

The hoarding of animals may be relatively common, but it is not well recognised in the psychological or veterinary literature, and research on it is needed in each country. The points here are based on research coordinated at Tufts Veterinary School in Massachusetts, USA.

People who hoard animals:

- have many more than the typical number of companion animals, e.g. 40 or more dogs and cats in one small apartment
- fail to provide even minimal standards of nutrition, sanitation, shelter and veterinary care. This neglect often results in illness and death in the animals, from starvation, the spread of infectious diseases, and untreated injuries or medical conditions
- deny that they are unable to provide this minimum care and deny the impact of that failure on the animals, the household and human occupants of the dwelling. For example, typically the home may be filthy, with several centimetres of animal excrement on the floor and furniture, and dead animals lying around.

Animal hoarders persist in accumulating and controlling animals. Some animal hoarders believe that they are ‘rescuing’ animals, and others in the community may take unwanted pets to them. Many animal hoarders may have various mental health problems such as disordered attachment resulting from adverse childhood experiences.

### Slide 32:

As a practising veterinarian, you may find yourself examining animals who you suspect may have been abused or neglected. This may also mean that the people in that household are at risk. So, you need to know:

- how to recognise animal abuse and neglect
- what to do about these, for the animal
- what to do about animal abuse for the owner, who may be at risk of domestic violence.

The Concepts in Animal Welfare Toolbox available at [www.animalmosaic.org/education](http://www.animalmosaic.org/education) provides you with details of each of these very important areas. Please refer to it.

<http://www.animalmosaic.org/education/tertiary-education/>

### Slide 33:

To sum up what we have covered:

- domestication has led to animals being dependent on us
- we generally have some degree of emotional bond with those animals, especially if we interact with them every day as caregivers. Such psychological factors, and wider factors such as working conditions, affect how we behave towards animals
- from the animal’s point of view, our behaviour creates sensory input. They may therefore perceive a given person as positive, neutral or negative. Where animals perceive a person as negative, they may often feel fearful and vigilant and this is a welfare concern
- the strength of the human–animal bond may blind us to the welfare of the animals. In the case of a strong bond with companion animals, this can give rise to obesity and behavioural problems, both of which are increasingly common. However, a weak bond, as with abattoir workers, can give rise to careless or rough treatment
- in all these cases, as vets you can help people to become more aware of the effect of their actions on animals, and help them to behave more appropriately. To be effective, however, you need to be a good communicator, which includes attempting to master the four main skills that you will find discussed in the Welfare Toolbox.

Finally, animal abuse, neglect and hoarding do occur. Violence to animals is linked to the problem of domestic violence (towards women and children especially), and general aggression to humans. It is likely that, as a vet in practice, you will encounter cases of animal cruelty. Please make a point of reading the relevant sections of the Welfare Toolbox tonight, and remember that this gives you the basic tools to recognise animal abuse when you are in practice, and to take appropriate action about the animals and people concerned.