

**ВОПРОСЫ ДЛЯ ПОДГОТОВКИ К ЭКЗАМЕНУ ПО АНГЛИЙСКОМУ ЯЗЫКУ  
ДЛЯ ПОСТУПАЮЩИХ В  
АСПИРАНТУРУ ЕСТЕСТВЕННЫХ ФАКУЛЬТЕТОВ МГУ**

1. Чтение, письменный перевод со словарем оригинального текста по специальности. Объем – 2000 п.зн. за 60 мин.
2. Чтение (просмотровое) оригинального текста на русском языке и передача содержания на английском языке. Объем – 2000 п.зн.
3. Беседа на английском языке и ответы на вопросы по теме научной работы.

Образец текста для письменного перевода

**Do animals feel pain?**

By drawing analogies between humans and other animals, researchers tentatively conclude that fish and octopuses can feel pain, but insects can't. But the cut-off point is inevitably fuzzy. Reducing the pain, distress and anxiety that is sometimes generated by scientific work on animals is probably the issue that exercises the public most. Fortunately, it is one that is tractable, without bringing scientific work on animals to a halt, if only people are willing to talk to each other. Critics of science believe that it is easy to tell when an animal suffers; some scientists believe it is impossible to know. I think that it is possible, but that the process of finding out is quite complicated.

Even among humans, pain thresholds vary greatly from individual to individual and from one moment to the next. Nevertheless, there is a useful approach to uncovering whether animals might experience pain: it is to use the observable signs associated with the subjective sense of pain in humans as criteria for the assessment of pain in other animals. Adopting a human-centred approach means asking whether the animal has anatomical, physiological and biochemical mechanisms similar to those that in a human are known to be correlated with such experiences. The approach also has to consider whether the animal behaves in similar ways to humans who are believed to be in pain.

No single criterion provides an all-or-none test for the existence of a subjective sense of pain. The evidence needs to be considered as a whole in order to build up a useful picture of the animal's capabilities. And even though the laws about the use of animals in research tend to insist on precision, nobody can provide a cut-off point that is anything other than arbitrary. The fuzziness of the boundary between pain and the absence of pain becomes obvious as, one by one, the criteria for recognising pain cease to apply as simpler animals are considered. The same is true for stress and anxiety.

The best we can do is to provide criteria that are based on measurements of an animal's behaviour and analysis of the way its nervous system works. If an animal subjected to conditions that might be supposed to produce pain stops activities that it habitually performs, or if it learns how to avoid such conditions, there are grounds for worrying that it might feel something. The existence of parts of its nervous system dedicated to avoidance of damage is another worry. These concerns are made much more acute if the animal has a large brain relative to its body and shows some of the cognitive capacity seen in humans.

Uncritical projections of human emotions and experiences onto animals, or the withholding of such empathy, can lead to a misreading of an animal's suffering. The subjective experiences of an animal, if it has any, may be totally different from our own, reflecting its different way of life and the different ways in which its body works. Interpretation of what is observed in another animal should not be based only on extrapolations from humans but also on a good knowledge of its natural history and behaviour. Different species react differently to potentially damaging situations. Stimuli that make a human run and scream might make other animals, such as rats or cattle or horses, immobile. To most people, they do not look frightened, because alarmed humans would not normally behave like this.

With knowledge of how animals behave, there are often grounds for broadening rather than narrowing the range of animals that are believed to suffer. The plausibility of projections from human experience

to other animals depends on good observational data about their normal behaviour, their requirements, their vulnerability to damage and the conditions in which they live. For instance, a horse with a broken leg may continue to graze. This makes good sense: it must maintain a high input of plant material to get enough to eat. Moreover, overt displays of pain may be counterproductive for an animal vulnerable to predators. But it is worth emphasising that those who are opposed to the use of animals in research are not simply worried about animal suffering. For instance, many people are disturbed by the killing of an animal whether or not suffering is involved.

The ultimate judgement, after these assessments have been put together, depends on the quality of the benefits and the severity of the costs. The aim of the whole process is to encourage scientific research with maximum benefit and minimum suffering to the animals. None of this is easy, but a lot of fair-minded people, starting from utterly different moral positions, are finding ways of reaching agreement. For this reason, I believe that the dark age of intolerance will not last for ever.