Matura bez problemu – zadania tekstowe 14

Przeczytaj tekst, z którego usunięto zdania. Wybierz takie, które w najbardziej logiczny sposób uzupełnia kontekst artykułu.

Dogs have been called man's best friend, and a new brain-imaging study of dogs indicates one reason why: there are striking similarities in how dogs and humans and, perhaps, a number of other mammals process voice and emotion.

Dogs, like humans, may have brain systems that function similarly in that they are devoted to understanding and processing vocal sounds and are also sensitive to the emotional content of voices. **(1)**

a) *Depending on the dog race obedience to orders can be trained easily or not.*
b) *These features have not previously been described in dogs or any species.*

The new findings offer an intriguing neurobiological glimpse into the richness of our particular corner of the animal kingdom.

People and dogs last shared a common ancestor more than 100 million years ago. So, if it is true that a voice-attuned region could be found in dogs' brains, the feature probably runs deeply in shared biology between the two species **(2)**

a) *It is also highly probable that dogs share this function with other mammals.*
b) *Wolves, being dogs' immediate ancestors were once among most widely distributed mammals.*

In order to specify the possibility, researchers trained six golden retrievers and five border collies to lay completely still inside a scanner in order to collect scans of their brains. The scans are able to measure blood flow, which is widely believed to be a good indicator of neural activity. **(3)**

a) *It is estimated roughly that domestication of dogs occurred around 30,000 years ago.*
b) *The training process took months, but the dogs retained the knowledge for many months.*

Inside the scanner, each of the 11 dogs, and a comparison group of 22 men and women, listened to nearly 200 recordings of dog and human sounds: whining and crying, laughing and barking. **(4)**

a) *The capacity of the brain was measured on the basis of muscle activity.*
b) *As expected, human voice-processing areas responded most to human voices.*

In dogs, corresponding brain regions responded to the sounds of dogs. In both species, the activity in these regions changed in similar ways in response to the emotional tone of a vocalization – whining versus playful barking in dogs, for instance, or crying versus laughing human voices.

To anyone who has had a dog as a companion and friend, those results might seem to be somewhat predictable. But watching the process evolve in dogs' brains underscores it. Researchers found that responses were not the same between species.

In the dogs, vocal processing regions of the brain responded to non-vocal sounds as well. But in humans, they were only triggered by voice, **(5)**

a) *which may have its origins in the trace of human social evolution.*
b) *despite being the proof of divergent paths of development.*

Regardless of the similarities, what differs between dogs and humans is much more extensive. Still, the regions identified in the study have deep evolutionary roots. And though canines might have developed their responses independently of humans, **(6)**

a) *influence of wolves genetic code upon the development of dogs' senses might have been negligible.*
b) *it's much more likely that they were already present in the common ancestor tens of millions of years ago.*

One more question that researchers have yet to answer is what exactly dogs hear when humans speak. The current study did not address that, but scientists have noted that there have been previous observations of common patterns in human and canine vocalizations. **(7)**

a) *Regardless of a dog's race, the sounds it produces convey a clear message to those who can understand their meaning.*
b) *When dogs signal positive emotions their barking is in short bursts, like human laughter.*

Barks are deeper and longer whenever they are upset. There are these acoustic rules that represent emotional information which seem to be common to many species.