



IBC assignment 1

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▼ Question 1

We know that autism is a disturbance in social interaction.

One of the characteristic features of autism is that kids with autism are inward-directed and they turn away from looking at the eyes. If we look at the normal person's image here, we can see that the normal person focuses on the eyes and the nose whereas the autistic person casts their eyes downward, does not focus on the eyes, does not focus on the mouth. So we can tell even by watching the eye motions, which is part of the biological motion system, that there is something different in their interaction.

▼ Question 2

1. Blue Region: Superior Temporal Sulcus

▼ Question 3

The knowledge which mirror neurons provide, it's internal and experiential. The experience gets shared immediately without interference. First of all, they give us the capability of understanding another person's action, that when somebody does something, your own nervous system goes as if you're carrying out the action yourself although your hand doesn't move. Secondly it also tells us that motor systems have sensory cognitive capabilities.

Coming onto social behavior mirror neurons provide us the social trait to be able to imitate others.

▼ Question 4

we used to think that sensory systems and the motor systems are completely separate.

After Giacomo's discovery of mirror neurons, we realised that, the two systems are linked by the motor system's interpretation of our movements and our sensory system's processing of visual information. On seeing someone do something through our sensory system, our motor system also responds. This means that the motor systems have sensory cognitive capabilities.

This correlation allows humans to imitate and understand things, and learn language through imitation.

▼ Question 5

In 1943, Leo Canner wrote a paper called "Autistic Aspects of Affective Disorders" . He talked about the cardinal symptoms of autism related to social behaviour in that and did research on 11 children.

Some of those symptoms were:

- repetition of words and phrases being spoken to them
- being withdrawn from social contact
- referring themselves in 3rd person
- language issues

▼ Question 6

The social behaviour of worms varies with some preferring to stay with others of their species, some preferring to stay with only those of their own gender of their species, and others preferring not to be together at all. if we look at a group of worms together, most of the worms want to spend most of the time with other worms, although sometimes they will wander off and come back and join the group. It's about the animals preferring to associate with each other.

Now animals, prefer to be with each other, they accomplish certain things within the group. They create an environment that's locally better for themselves.

Bargmann's, research , she found that the social behaviour depends on factors like genes, and we can describe the difference between them based on a single gene that varies

between them. Ones that have a high level of activity of the gene will tend to spend most of their time alone. Worms that have a low level of activity will spend most of their time together. So we can actually trace out differences between individuals.

This particular gene is called MPR-1, and it's a neuro-peptide receptor.