

Beastie Babble

or How do Animals Communicate?

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What do Animals talk about?

Hi there! My name is Balu and I have a lot of animals: lizards, frogs, fish and parrots in particular. And of course, Panna the dog is here too, who isn't really my pet, she's one of the family, and this story began with her. When Panna came into our family, she didn't speak a word of human, so it was lucky that we spoke a little dog, because Mattie, our old dog had been teaching us for years. Then, of course, Panna quickly learned our common language, and now she's got the lingo off to a tee, but that got me wondering how other animals do it. Talk, I mean. Do they talk at all? Who teaches them? What do they talk about? Because I reckon that certain topics, such as

WOULD YOU LIKE ANOTHER SALAMI SANDWICH?

or

WHY DOES THIS SHOE HAVE DROOL ON IT AGAIN?

and

HOW DID THIS APPLE CORE GET INTO YOUR POCKET?

don't even cross their minds. So, I asked my dad, who explained it all from start to finish, and because he takes everything terribly seriously, he said that what passes between animals is not conversation, but rather **COMMUNICATION**. So what?

BUT WHAT ON EARTH IS COMMUNICATION?

Communication happens when we want someone else to know about something that is important to us, so we tell them, and they listen to us. But we don't always say things with words, because not every man—or animal—is a wordsmith. For example, Panna the dog certainly isn't, so when she wants me to know that she loves me very much, she simply licks my face, because that's her **way of communicating**.

In response, I give her a small piece of luncheon meat because that's my way of letting her know. That way we both understand that we're buddies, forever.

We act a bit like a sort of **transceiver**. We create a picture in our minds of what the other person wants. In the best case, it will be the same picture, or at least a very similar one. By the way, this communication is not only done by dogs and humans, but also by other animals, starting with single-celled organisms, which of course immediately made me think...

what could a single cell tell us?

Quite a lot of things, actually, which is good because it doesn't hurt even single-celled organisms to know what's going on around them.

An average single-celled organism looks just like an average fried egg: **Oopsy-daisy!**

Here's the biggest cell in the world, just laid by an ostrich, so it evidently has no ears, no nose, no eyes, no mouth, but somehow, it's still sending messages to the others.

I wonder how?

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INVISIBLE AND INAUDIBLE SIGNS

FLAVOURS, SMELLS AND PHEROMONES, IN OTHER WORDS CHEMICAL COMMUNICATION

If you put a drop of water from a garden pond under a microscope, within two minutes, the similar single-celled organisms will start to gallivant about in it.

Something like this:

But in order to find each other, they don't shout, point or send letters. They send each other messages in a different way. They use chemical messages that are completely invisible.

One egg head releases it and the other receives it with its sensor. Because scientists are obsessed with naming everything, the sensor is scientifically called a **RECEPTOR** and it's a marvellous invention because its owner can use it to spot enemies, food, sunshine, or, say, family members, whatever anyone is looking for. However, messaging with invisible means can be a dangerous business if it's received by something that isn't a **friend**, that is, by an **enemy**.

Let me explain what I'm thinking of.

These are amoebas. They are single-celled organisms and look exactly like fried eggs. By the way their favourite food is hydra-crunch.

And these are the hydras. They're just like a bunch of skittish, upside-down, very nervous roots, but they're multicellular. Incidentally, they can't stand the amoebas, they're the reason they're so nervy. Now, when a hydra uses invisible means to send a message to the world at large, such as:

HI THERE, OTHER ROOTS, I'M HERE TOO!

then not only other Hydra's but also any amoeba that are wandering around could notice this signal, and if one of them intercepts the message and then finds the sender, it will wolf it down in no time. The single cell the multicellular organism. So, as you can see, **there is no justice**.

By the way, this secret messaging is an ancient method, but it's very successful, because multicellular organisms do it too.

With flavours: for example, that is how salamanders let you know that you shouldn't eat them.

With smells: skunks, for example, use smell to let you know that they want to be left alone.

With pheromones: this is the most interesting one, so there will be a lot more on this... shortly!

It's not so easy to choose the third because they are all perceived by chemoreceptors (cells that sense chemical compounds), and even scientists often argue over whether a signal is a flavour, a smell, or a pheromone. So, it's really on shaky ground! The sense of taste is perhaps different from the other two because in order to communicate by taste, we usually need to be getting up close and personal proximity. Say, for example, with a well-aimed bite.

FLAVOURS

Since we're already talking about scientists, let's stay with them for a moment. They speculate that the sense of taste may have evolved to protect manic samplers from poisoning. They also agree that the danger - that is, if something is **POISONOUS** - is linked to a bitter taste. Of course, it's easy to see that sending a message with flavours doesn't pay off, because who wants others only to know what they wanted after eating, or at least biting them. Or **licking them**. So, let's take it as read that only so many things can be communicated by taste, but those things really:

LISTEN!

I'M POISONOUS!

DON'T BITE ME AGAIN, NOR ANYTHING THAT SMELLS LIKE ME, MY OWN KIND!

Now that's what **SALAMANDERS** do.

SMELLS

Smells, of course, are a completely different matter. Smells can communicate a lot, even if the whoever wanted to say something is already far away. But obviously you can also send messages over a distance with pheromones. **Still, what is the difference?**

Maybe that by using the language of smell we can speak to a variety of beings, not just our own kind, and what we say is either taken into account or not. There is no pressure. What do I mean exactly?

Here, for example, is the **SKUNK** I mentioned earlier who wants to be left alone. If it doesn't want to become more closely acquainted, it uses its stink bomb and the spray will be understood by all, whether they are big predators, curious naturalists, or visitors to the zoo. And the cocktail doesn't just smell appalling, it's also excruciatingly painful if you get covered in it. It can even cause temporary blindness. The message is so unmistakable, that most of the time, just a little hint - say, raising the tail is enough to discourage any intruder from approaching.

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