**Animal Cognition**

Science writer Ed Yong in this [video](https://aeon.co/videos/to-understand-the-limits-of-human-senses-look-to-the-wild-world-of-animal-cognition) encourages us to consider the living-worlds of other species.

He explains that bats “see” their world by producing “calls” which echo back to their ears. These calls are so high pitched that we can’t hear them and so rapid that bats in darkness can “see” more clearly a flying moth than we can in bright light. As sound travels further in water environments, dolphins using echolocation clicks can “see” fish clearly at a distance equal to three football fields laid end-to-end.

Hummingbirds have four light cones whereas most humans have three. So, hummingbirds see hundreds of diverse colors invisible to us. Scallops likely don’t see much color but have up to 200 eyes enabling them to detect movement all around them. As bee eyes evolved to see colors, we realize that flowers evolved their colors to entice bees to visit them.

Large animals like us and crocodiles use sensors in our mouths to “taste” our environment, whereas small organisms such as flies use “taste” sensors on their feet for the same purpose. Tiny planthoppers communicate by creating vibration signals that travel on the surface of leaves. By transforming these vibrations into sounds we can hear, scientists have learned that plants are venues for “vibrational choruses.”

Harbor seals have whiskers that enable them to track the ”hydrodynamic” imprint in water of fish that have swum by. A seal is able to swim along the twists and turns taken by a fish as though “seeing” a path in the water.

We know but may not appreciate that dogs use their extraordinary sense of smell to experience sensory changes in a world completely unknown to us.

Greater awareness of “animal cognition” could increase not only our wonder at the diversity and awareness of animal cognitive abilities but also widen our compassion for the animals we are harming with our light and sound that pollutes their sensory experience.

**Might we reduce our devastating impact on their living-worlds?**

Ed Yong provides these insights and challenges in his 2022 book entitled *An Immense World: How Animal Senses Reveal the Hidden Realms Around Us* (Random House).