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Another step towards 'one medicine'

Although animal and human diseases are often caused by similar pathogens and can be studied using similar methods, governments usually distinguish between human and animal health when allocating funding and research support. In a February statement, the Royal Society (the UK's national academy of science) called on the UK government to change its policy and to adopt a 'one medicine' approach that combines research on diseases affecting both animals and humans. New initiatives should involve the creation of a National Institute for Infectious Diseases that will support both human- and animal-related research.

According to the Royal Society, an integrated approach would lead to improvements in public health and in the government's ability to respond to pandemics that affect both humans and animals. Such situations can involve diseases that cross over from wild animals to humans, as well as livestock diseases that pose food safety concerns. The human and animal health sectors have worked together in the past—for example, in planning a response to potential outbreaks of avian influenza—but an organized infrastructure for collaboration will allow for more effective use of funding and resources. It will also improve researchers' ability to translate findings from veterinary research into human medicine.

The jackdaw with the shifty eyes

Whereas humans transmit a good deal of information by gesturing with their eyes, most species do not pick up on such subtle motions and communicate using more obvious physical cues such as head orientation. A new study by Auguste von Bayern (University of Cambridge, UK) and Nathan Emery (University of London, UK) shows that jackdaws can respond to differences in the orientation of humans' eyes and can follow a human's gaze to find hidden food. These findings may shed light on the ways that animals communicate with conspecifics and with other species.

The researchers tested hand-raised jackdaws in two situations (*Curr. Biol.* **19**, 1–5; 2009). In one, they placed a piece of food between a jackdaw and an unfamiliar human experimenter, creating a 'conflict situation'. Jackdaws took longer to grab the reward if the person was looking directly at it than if the experimenter's eyes were averted or closed. In a second experiment, jackdaws were presented with two containers, and a familiar experimenter pointed with her eyes towards the container that held hidden food. The jackdaws understood that the experimenter was trying to communicate information to them and approached the correct container. Notably, in similar experiments, more human-like species such as apes were unable to interpret such gestures.

Embracing differences to improve research

Many believe that the best way to design a reproducible study is to standardize the environmental conditions under which experiments are carried out; this supposedly ensures that other labs will be able to replicate every aspect of the study. An analysis by Hanno Würbel (University of Giessen, Germany) and colleagues suggests that such standardization is counterproductive (*Nat. Methods* **6**, 257–261; 2009). It is impossible to create identical environments in different labs, so if the outcome of an experiment is dependent on a specific set of environmental conditions, different labs will obtain different results. Furthermore, any conclusions that are drawn from standardized experiments are unlikely to be translatable to clinical medicine, in which environments cannot be controlled.

The authors evaluated previously published data from a multi-laboratory study that compared three strains of mice. They found that each individual laboratory obtained many 'false positives', that is, results that did not hold up when all data were pooled. When the authors reanalyzed the data by comparing 'heterogenized' experimental groups (in which each group included mice from all labs), the results were far more accurate. These findings suggest that creating a range of environmental conditions rather than a single standard might improve the robustness of research outcomes.