Aversive Conditioning Essay, Research Paper

Aversive conditioning is a manufactured negative response to

certain things, much like the operant conditioning developed by

Skinner. The contingent behavior is behavior that, when

performed, results in the delivery of specific consequences or

reinforcers. This article described the measures taken to make

coyotes stop wanting to kill lambs for food. The authors?

contention is that it may be possible to reconcile the desires of

both ranchers and conservationists. The latter group wishes to

enable the coyote and, perhaps other predators, to survive in the

open range, as they have for millions of years. Species that kill farm

animals include others: mountain lions, bears, bobcats, and red

wolves as well as coyotes. This paper on aversive conditioning

mainly addresses whether behavior of coyotes can be altered

without affecting their survival in the wild. The question Mssrs.

Gustavson and Garcia attempt to address is whether coyotes can

be conditioned to kill animals such as mice, rabbits, gophers, and

squirrels- species of no economic value in the western United

States- while leaving sheep alone. Clearly, sheep have tremendous

economic value in terms of meat and wool production, and

ranchers as well as the general meat-consuming public have a

vested interest in the survival and success of the ranching

industry. Just as clearly, environmentalist and conservationists

have an interest in seeing that certain species are enabled to

survive in their native habitat, and not simply confined in zoos

under whatever terms humans dictate.

To see if they could make coyotes stop killing lambs, the authors

first took a sample population of coyotes from different regions of

Montana where coyotes were notorious for killing shepherds?

flocks. They captured seven coyotes, five from the wild and two

from captivity. Presumably all of them loved to eat lamb meat. They

fed them tainted lamb, wrapped in fresh lamb hide. The meat itself

was not toxic to the long-term health of the coyotes that devoured

it. Instead, it was laced with lithium chloride, which causes

vomiting. One assumption made was that the lithium did not

actually affect the taste of the meat. Therefore, the coyotes

actually did consume the meat, and uniformly became sick after

eating the lamb. As a result of associating the meat with vomiting

the coyotes didn?t want to eat lamb anymore. On the contrary, they

ran away and hid from the lambs after having eaten the bad lamb

meat. Only weeks afterward did they begin to approach lambs as

prey when given the chance, and they didn?t devour their food as

they usually did. They tested their food one bite at a time, waiting

between bites to see if they got sick.

In fact, during an earlier experiment with hamburger tainted with

lithium the coyotes all became ill. After the coyotes associated the

hamburger with emesis, they didn?t even taste hamburger offered

to them. Instead, the coyotes urinated on the meat, turned over

their meat dish, or actually buried it. The experiment with

lithium-laced lamb was a temporarily successful one in that the

coyotes were weaned off of lamb meat.

Despite this apparent success, other problems could arise which

this experiment did not address. For example, coyotes might not

have any other source of food other than lamb. There may or may

not be enough other edible things available to enable coyotes to

survive. Lamb is a staple food for coyotes in Montana, and other

food sources might not replenish that lost by having lamb removed

from the coyotes? diet. It is noted that coyotes feed on mice,

squirrels, rabbits, and even grasshoppers. Yet it is by no means

certain that these small animals alone would enable coyotes to

survive in the wild. Neither author claimed that coyotes kill sheep

to drive ranchers out of business, they kill sheep to survive.

Furthermore, wrapping lamb meat in sheep skin, which is how the

authors attracted the coyotes, to bait the lithium capsules may not

exactly mimic the taste of lamb "on the hoof". It is very possible

that the meat wrapped as bait tastes different in qualitative ways

from that of a live or freshly killed lamb.

Moreover, the number of animals used in these experiments was

extremely small- fewer than ten for all experiments run. It is unclear

from the reading of this article whether it would be either possible

or feasible for every coyote living near sheep ranchers in Montana

could be captured, imprisoned for a period of time, and subjected

to this kind of aversion therapy. The authors suggest that coyote

pups might be conditioned to learn to like the types of food that

their mothers do- to learn eating habits in the den from parents

rather than only from people. If this were so, then aversion therapy

would be self-perpetuating. Yet they advance no evidence that this

could be the case. In fact, it is unclear that the coyotes retain a

dislike for food for any length of time. For example, three coyotes,

which the authors conditioned not to eat rabbit meat, actually

learned to eat them again. One such coyote killed and ate a rabbit

within one week, albeit cautiously. Therefore, although it may be

deemed a success to be able to state that a certain coyote is well

on his/her way to hating lamb, it may be that these coyotes need

repeated aversion therapy towards sheep, or towards other

livestock which other ranchers might raise.

Finally, even if aversion therapy turns out to be effective, or

whether it must be repeated to be effective, there is reason to think

that this behavior will not be self-perpetuating. There is no

evidence produced that a coyote will avoid sheep simply because

its mother does. Aversion to lamb meat is obviously a learned

habit, not a genetic one. If all coyotes need to be captured, and

perhaps tagged and periodically recaptured, in order persistently

avoid or hate lamb meat, the conservationists are defeating their

own purpose. For their plan to work, all coyotes will have to be

captured and "domesticated" in some way. It would appear that, if

this turns out to be the case, truly wild coyotes will have become a

thing of the past, and they will not be allowed to roam free in their

feral state in any real sense after all.

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