

# [Aversive conditioning](https://assignbuster.com/aversive-conditioning/)

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 didnt 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 didnt 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 didnt 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.