

# [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.