

Premack's principle: More probable behaviors will reinforce less probable behaviors.

Adding Power to the Premack Principle

By Peggy Swager

More than 20 years ago, I interviewed a dog trainer for an article. Mathilde Decagny worked for Birds and Animals Unlimited, a company that supplied animals for television and movies. This particular trainer had transformed an out-of-control Jack Russell Terrier who became known as Eddie, the dog who starred in the sitcom “Frasier.” My goal in the interview was to learn what the trainer did to initiate the change in a dog who had a long list of misbehaviors, especially since Moose (his real name) wouldn’t work for treats. When I originally wrote my article, I identified how the trainer used the Premack Principle. I later came to understand that Intrinsic Motivation also played a key role.

The Premack Principle states that more probable behaviors will reinforce less probable behaviors. Some trainers describe this as, “For the dog to get what he wants, he must first do what you want.” When I wrote the article, I felt a key to Moose’s reform came through the use of the Premack Principle. But I also felt that more had to be going on than just the application of Premack. It took me years to discover an important component for this dog’s dramatic reform.

Moose’s reform began the day after the trainer from Birds and Animals Unlimited acquired the dog from the owner. The trainer left Moose in her trailer for the day because she had another job to go to. When the trainer got home, she discovered Moose was walking

around on the kitchen table. Moose was known to jump when the dog was trying to snatch any treat from people’s hands. However, this trainer noticed that some of the times Moose jumped, the dog enjoyed the activity. A dog who enjoys jumping for no other reason than the action delights the dog, is doing the activity for its intrinsic reward. The trainer decided to use Moose’s jumping as a training tool. The trainer began Moose’s reform training by holding out a treat, and when Moose jumped trying to snatch the treat, the trainer rewarded the jump by feeding the treat. After several repetitions where the treat was paired with jumping, the trainer began a series of steps where she changed what she rewarded with the treat.

The first change in the training was to mark the jumping by saying a command when the dog jumped while rewarding the treat. Once that reward system was clearly established, the trainer began to speak the command to jump, and only reward when the dog jumped on command. This training helped teach Moose that for him to get what he wanted -- the treat -- he had to follow a command. This was the beginning of the trainer being able to use treats for more training. Before this training, there was no treat Moose wanted to eat that would get him to comply even to a simple “sit” command. After the training where a treat was paired with the dog jumping, treats had enough value that Moose was willing to do less probable behaviors of following commands to get to eat his treat.



Moose, the Jack Russell Terrier who portrayed Eddie on the television show "Frasier." His misbehavior with his original owners led to him being given to a trainer, who then used that behavior to turn him into a star. Photo courtesy of Paramount Network.

Examples of intrinsic rewards in dogs include digging and sniffing. Chasing can also be an intrinsic reward as long as there is not another goal for chasing, such as eating. Jumping can be intrinsic provided the jumping is for the sheer delight of the action of jumping.



Although with Moose, the Premack Principle became key for his training, until I learned about intrinsic motivation, it always bothered me as to exactly how those treats took on such a high value when they were previously very low in value for Moose. I know dogs jump for a lot of reasons, including when the dog is excited to see you, when the dog is anxious about getting out of a pen, or like Moose did to snatch treats out of hands. After learning about intrinsic motivation, I finally found the missing piece of my training puzzle. So what exactly is intrinsic motivation and how does it apply to animal training? Intrinsic motivation is doing an activity for its inherent satisfaction. With dogs, as with people, the reward is in the internal joy or satisfaction the dog gets from what the dog is doing.

Harry Harlow and Edward Deci are accredited with the first work with intrinsic motivation. In 1949, these two researchers gathered eight rhesus monkeys for a two-week experiment on learning. A three-step puzzle was used. The experimenters placed the puzzle in the cage prior to beginning their training of the monkeys to solve the puzzle. To the researchers' surprise, the monkeys began playing with the puzzles with focus and determination. What was even more surprising was that the monkeys appeared to be enjoying themselves. The monkey began to figure out how the puzzle worked even though there were no rewards offered. The researchers realized they were dealing with a different kind of motivation other than satisfying hunger, thirst, or a carnal urge. Harlow offered a novel theory: "The performance of the task," he said, "provided intrinsic reward."

Examples of intrinsic rewards in dogs include digging and sniffing. Chasing can also be an intrinsic reward as long as there is not another goal for chasing, such as eating. Jumping can be intrinsic provided the jumping is for the sheer delight of the action of jumping. I remember a foster dog I had named Leah. When I'd go to her outside pen she'd get excited and dash back and forth. Then, she'd stop and begin to jump. She didn't strike the fence like a dog trying to get out, but instead would leap upward with her tail spinning, appearing to find delight in the jumping action. That kind of jumping has an intrinsic reward.

After learning about intrinsic motivation, I can picture Moose jumping upward when he saw the treat to snatch, enjoying the jumping itself, and maybe even the challenge of getting the treat.

By pairing the treat with the jumping that created an intrinsic reward, the treat took on a high value to this dog.



Shay is concerned.

I've found success using intrinsic motivation with the Premack Principle. One example that comes to mind was with a foster dog named Shay. When out on a walk, Shay would try and drag me to the side of the road to sniff different scents. I have no issues with allowing a dog to sniff from time to time. However, Shay wouldn't comply with any commands or ever glance in my direction when on

a walk. And it was difficult to pull her away from what she was sniffing. When on a walk, I wanted this dog to learn to pay attention to me, not pull on the leash, and come even if she was engaged in sniffing. Although treats worked great with this dog when teaching her basic commands inside the house, Shay would refuse a treat if I used it to try to lure her away from sniffing.

The first part of Shay's retraining using the Premack Principle was for me to identify a highly desired behavior. As mentioned, that behavior was not eating a treat, it was sniffing. The second part was to identify the less desired behavior, which was coming to me when I called. For me to use sniffing as a reward, I needed to be in control of when the dog was allowed to sniff. To achieve control over her sniffing, I needed to redirect the dog before the dog was committed to her self-indulging action of sniffing. So I learned her little cues such as when she had first noticed a scent, when her head lifted slightly, and her nose extended. Shay would then focus her attention on the side of the road. From experience, I knew about how close she'd react to that scent by pulling as hard as she could to the side of the road. I knew it was key to give my come command before Shay launched into pulling, so I'd say "come" before she'd committed to pulling on the leash. After my "come" command, I used the leash to guide her to me. As soon as she arrived, I'd say "go sniff." Then I'd quickly take her to the side of the road and let her indulge herself.



Shay becomes content with the walking process by not pulling.

After a few practices, Shay would quickly come on command, so I added a sit before telling her to “go sniff.” I continued to shape her behavior to where she had to sit and look at me. As time went on, Shay offered a glance at me when she detected a scent she wanted to explore. I rewarded this with a “go sniff.” Over time, I gave her the “go sniff” command less often. Instead, when she glanced my way, I’d praise her and pet her, then continue walking. The goal was to teach the dog that she didn’t need to sniff every little scent. Shay soon became content walking by a lot of the scents. I felt it helped to do repetitions on the same path, making the sniffing more mundane.

Shay soon became content with the walking process, and no longer tried to sniff things along the side of the road. However, she maintained a very strong response to the “come” command. I felt that by using intrinsic motivation as the higher value reward when doing the Premack Principle, it worked to secure a stronger dedication to the “come” command than I’d seen in dogs who were trained using treats.

A lot of trainers turn to the Premack Principle with dogs who show no interest in treat training. I learned a lot about how to give a treat a “high” value from the first trainer who began the reform training for Moose, that canine sit-com star on “Frasier.” What was key for Moose was the pairing of the treat with an intrinsic motivation. When using the Premack Principle, I have found that using intrinsic motivation as the strong probable behavior that can result in the dog complying strongly to the less probable behavior.



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Peggy began teaching dog classes and working with problematic dogs since the 1990s. She is an award-winning author with multiple articles and books. This article is an excerpt from one of her accredited online courses. www.peggywager.com

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