CYRA

DOGNITION REPORT - JULY 16, 2025

Dognition®

A CHEEKY WOLFISHNESS AND A STRONG INDEPENDENT STREAK ARE WHAT MAKE A MAVERICK SO SUCCESSFUL.

Everybody loves a Maverick. This is the one who strikes out alone and doesn't conform to anyone's standards. Cyra definitely prefers to tackle problems independently. When it comes to understanding the physical world, she can hold her own compared to other dogs. In terms of social skills, Cyra puts the "wolf" back in "lone wolf." This specific performance in the range of games testing social skills was definitely more wolf-like than most dogs. But this cheeky wolfishness is part of Cyra's appeal.

THE DOGNITION PROFILE

Usually, when you get test results, you see a score that means you either passed or failed. To compare your results to someone else, you see who got the higher score. This is why your dog didn't take a test. Instead, you played a series of games together - and when you play a game there is more than one way to win. Success often comes from playing to your strengths.

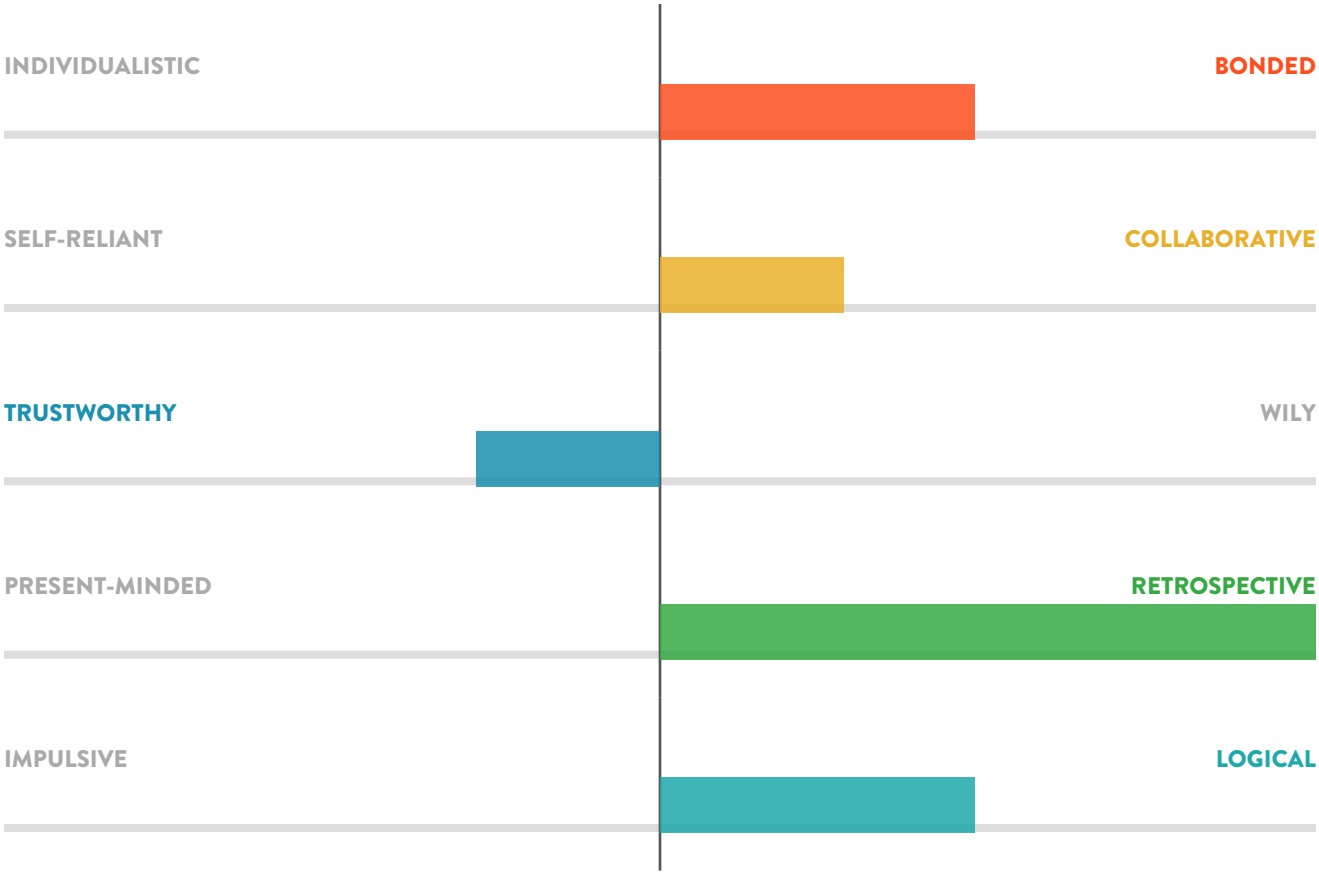
There has recently been a revolution in how we think about intelligence. The Dognition Profile is based on this cutting-edge field called cognitive science. Cognition is the study of how the mind works and draws on many scientific disciplines, from psychology to computer science to neuroscience.

By studying animals, cognitive scientists have made three important discoveries:

> Animals use many types of cognition to survive (learning skills from others, remembering the location of food, inferring the solution to a new problem or deceiving others during competition).
>
> Different animals rely on different cognitive strategies. Asking if a crow is more intelligent than a dolphin is like asking whether a hammer is a better tool than a saw. Each animal has strategies to solve a unique set of problems.
>
> Just because an animal tends to use a certain strategy to solve specific problems doesn't mean he or she will always apply that strategy to all types of problems. Animals rely on a toolbox of strategies that depend on a variety of factors. Dognition gives you insight to the most significant tools that your dog will use on a daily basis to interact with you and the world.

Based on these findings, the Dognition Profile looks at five cognitive dimensions. Rather than counting correct and incorrect answers, the Dognition Profile identifies your dog's cognitive style, and the strategies she relies on to solve a variety of problems. Using this revolutionary new science, the Dognition Profile will give you an unprecedented window into the workings of Cyra's mind and reveal her particular genius.

COGNITIVE DIMENSION RESULTS



EMPATHY - Reading and responding to the emotions of others

COMMUNICATION - Using information from others to learn about the environment

CUNNING - Using information from others to avoid detection

MEMORY - Storing past experiences to make future choices

REASONING - Inferring the solution to new problems

EMPATHY

Cyra's empathy scores were off the charts. Empathy is the ability to feel what someone else is feeling. Humans are extremely empathetic; it is one of our best qualities. Empathy is not something we are taught; it is present even in young children, growing and strengthening as we get older.

Researchers have recently suggested that other animals also have empathy, or at least a basic form of empathy. If this is true, dogs are an ideal place to look. Humans and dogs go back thousands of years - enough time for the bond between us to develop into something special.

If most dogs are bonded to their owners, Cyra absolutely adores you.

FIG.1

Playing and interacting with your dog like you did in the Dognition games increases your oxytocin, the hormone responsible for feelings of pleasure, bonding, and affection.

YAWN GAME

In this game, you yawned and recorded whether Cyra yawned in response. Yawning in dogs can be an indicator of stress, but we were measuring something different - social yawning. The rationale behind this game is that even as young children, we laugh when we see someone laughing, and we cry when we see someone in distress. Our ability to "catch" the emotions of others is called emotional contagion. A common form of emotional contagion is yawning. If you see, hear or even think about someone yawning, you will probably feel an irresistible urge to yawn.

Cyra did not yawn in response to your yawn, but this is not surprising. Although dogs are one of the few species besides humans that contagiously yawn, there is variation among dogs. Data from several research groups shows differing results, but our preliminary data shows that only 20% of dogs yawn contagiously.

Recent studies have shown that dogs only catch yawns from humans, not other dogs.

EYE CONTACT GAME

In this game, you timed how long Cyra held your eye contact. Before babies can hug or speak, they use eye gaze to bond with their mothers. Research with dogs has shown that a similar phenomenon may happen with owners and dogs. Owners whose dogs stared at them for longer had significant increases in the hormone oxytocin. Oxytocin, also known as the "hug hormone," is related to feelings of bonding, pleasure and affection.

Judging by the extraordinary length of time Cyra spent gazing soulfully into your eyes, you probably often find her staring at you for no reason. You might wonder if Cyra is trying to tell you something, like she is hungry, needs to go to the bathroom or has an opinion on what to do over the weekend. But Cyra may not want or need anything - she may be just hugging you with her eyes.

Dogs can even be better than aspirin. Children in a hospital reported that their pain was four times less when they played with a dog than when they spent the same time relaxing.

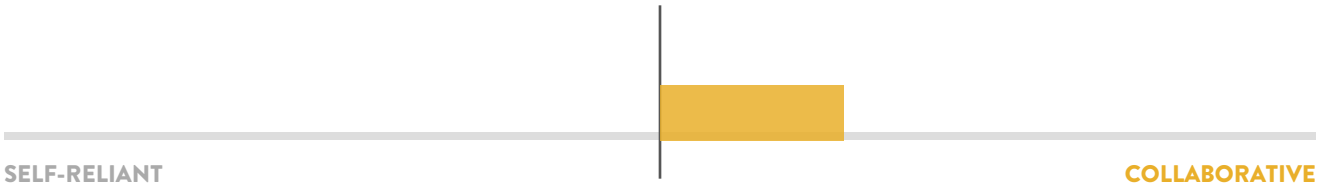
COMMUNICATION

Cyra's performance was highly collaborative. You probably notice that Cyra can read you like a book. Maybe she seems to know where you are going before you do. Maybe she can tell where to find a lost ball just by you glancing in the right direction. However her talent expresses itself, you can be sure that Cyra pays close attention to your gestures and what you are trying to communicate.

Cyra is remarkably like a human infant, who start reading communicative gestures at around nine months old. This ability is the foundation for all forms of culture and communication, including language.

Communication is the basis of many relationships, including our relationship with dogs. Cyra's behavior in the Communication games demonstrated exactly why the dog and human relationship is so special.

FIG.2



ARM POINTING

Although the pointing game may have seemed simple, the skills it required are quite specialized. Dogs are one of the only animals to rely on human gestures - but even among dogs there is variation. Compared to other dogs, on this scale Cyra was more like a chimpanzee. Although chimpanzees are extremely intelligent in other areas, when they play a similar game they do not use a human point to find the food. Instead, they tend to use more self-reliant strategies. This does not mean that Cyra is not communicative. She may be more responsive to other signals, such as your voice. Or, because she didn't need your help to find the treats, Cyra decided to solve this problem on her own. Cyra might depend on you more in situations where the solution is not as obvious.

FOOT POINTING

You probably don't usually point things out with your foot, so this was one way to see if Cyra could read a gesture she has seen infrequently or not at all. If Cyra is good at solving a problem but can't solve a new version of it, then she probably learned to solve the original problem through lots of practice. For example, perhaps in the previous game she was just following the motion of your hand without understanding your communicative intentions. If Cyra can also solve the new problem, then she probably understands enough to spontaneously solve a range of related problems.

Cyra's performance in the foot pointing game was interesting because she did not tend to follow you when you pointed with your hand, which we think of as a more familiar cue. But when you gestured with your foot she followed you almost every time. Perhaps you regularly point out bits of food on the floor with your foot. Or perhaps, because Cyra could see food in both places, she didn't feel the need to follow your hand point. But when you did something unusual - pointing with your foot - Cyra thought she had better pay attention.

Many dogs tend to ignore unintentional cues from humans. The most effective way to communicate is to call the dog's name, make eye contact, then point and look in the direction of the object.

CUNNING

Cyra scores as trustworthy in this game since she does not use your social information when deciding whether to take advantage of you. When you put the treat down in front of Cyra and said 'No,' you then presented her with different attentional states. In the first condition, you were watching Cyra directly. In the second condition you covered your eyes, and in the final condition you turned your back.

A wily dog would have waited until you could not see before they took the treat. In contrast, Cyra was more likely to take the treat when you were looking at her than if you had your back turned. This may seem a little audacious, but, in fact, it actually makes her trustworthy because she does not use your social information to deceive you.

This is especially impressive because in the Communication dimension, Cyra showed she can easily and flexibly read your gestures. But when given the chance, she won't use this knowledge against you.

FIG.3

When it comes to begging, dogs prefer to be sure you're paying attention. In one study, dogs preferred to beg from a person who was looking at them rather than someone wearing dark sunglasses.

MEMORY

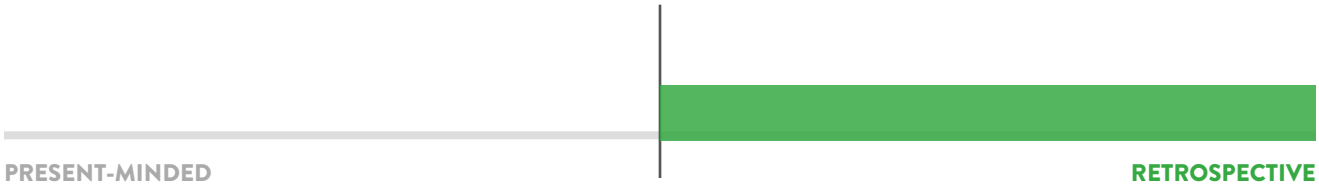
Cyra has an amazing working memory, which is a type of memory that allows your dog to keep information in mind for a few minutes and mentally manipulate it. This may sound simple, but working memory is crucial for any kind of problem-solving. In humans, working memory has been found to correlate with skills in learning, math, reading, and language. Researchers have even found some evidence that in children, working memory is more predictive of academic success than IQ.

In these memory games, Cyra had to understand that the treat continued to exist, even though it had disappeared from view. In the wild, this ability is essential. Animals have to keep track of mates, predators, and prey that might disappear momentarily behind a bush or a rock.

If Cyra is an avid fetch player, you've probably noticed that no stick or ball escapes for long. Cyra skillfully searching for an object that has briefly disappeared is a perfect example of her using her working memory to solve a problem.

For Cyra, out of sight is definitely not out of mind.

FIG.4



Most dogs can remember their mothers even if they haven't seen them for two years. However, they can't remember their brothers and sisters after a similar separation.

MEMORY VERSUS POINTING

In this game, Cyra saw you put the treat under one cup, but point to the other cup. Cyra preferred to rely on the information in her working memory rather than what you pointed to. Even though you gave Cyra misleading information, she remembered where the treat was and chose to ignore you. This shows an independent thinker; you should be aware that in other situations Cyra might not listen to you if she thinks you are wrong.

Despite being genetically similar, dogs and wolves make opposite choices in this game. This difference may be behind why we love dogs so much.

MEMORY VERSUS SMELL

Since dogs have such a keen sense of smell, you may have been surprised that after you switched the cups, Cyra used her memory over her sense of smell. She went to where she remembered seeing the treat hidden, rather than sniffing out where the treat was.

Because a dog's nose can sniff everything from narcotics to cancer, whenever we run a study where we hide a treat under one of two cups, the first question people always ask is, "Can't my dog just smell the food under the cup?" It was certainly our first question, but extensive research by half a dozen independent research groups has concluded that dogs do not rely on their sense of smell to find the food in these games.

If dogs were using smell, they would go directly to the cup with the hidden food. In fact, these studies found that dogs only choose the correct cup around half the time - which means they are guessing. Dogs do have an excellent sense of smell and can probably detect food if allowed to sniff both cups before choosing. But when you study their first choice, they cannot localize the food to a specific cup from a distance of six feet away.

One study found that to successfully track a person's direction of travel, tracking dogs need at least five sequential footsteps.

DELAYED CUP GAME

This game was a perfect demonstration of Cyra's excellent working memory. After you hid the treat Cyra had to retain the information for up to two and a half minutes before making a choice.

This skill comes in handy in the wild. Feral dogs tend to be endurance hunters, slowly wearing down their prey. During the chase, the prey may not always be in direct sight, and feral dogs have to remember where their prey was last seen and predict where they might reappear.

In these kinds of memory games, most cats quickly start to forget where an object is after only 10 seconds, while most dogs are still able to show success for up to 4 minutes.

REASONING

You can be very proud. Cyra just aced the most difficult games in the Assessment. Reasoning is the ability to solve a problem when you can't see the answer and have to imagine the solution. Unlike learning through trial and error, which doesn't necessarily require much understanding, reasoning requires that you truly understand the problem and the phenomena behind the problem.

A Sherlock Holmes among dogs, Cyra was able to solve the mystery by imagining different solutions and choosing the one that made the most sense. This leads to a lot of flexibility. She can solve a new version of a problem she has seen before, and spontaneously solve new problems she has never seen before. This is a sign of true genius.

FIG.5

Some studies show dogs are better at solving complex puzzles when humans are not around. When humans are around, dogs look to us for help rather than solving it themselves.

INFERENTIAL REASONING GAME

In this game, you presented Cyra with a problem and provided some, but not all of the information needed to solve it. When you showed Cyra the empty cup she had to infer that the treat must be in the other cup.

This is not as easy as it sounds because Cyra was also attracted to the empty cup, for the simple reason that you touched it. It looks like Cyra switched back and forth between strategies in this game, sometimes making an inference and choosing the correct cup, and sometimes relying on your social cues. Either way, this shows impressive flexibility.

By no means did Cyra do badly on this game; in fact, she developed quite a clever strategy. She developed a right or left side bias, meaning when she didn't know which side was correct, she went to one side every time. This is pretty clever, because 50% of the time she was correct.

Ravens and crows have been shown to have incredible reasoning abilities that surpass dogs, and even rival some human children. But when it comes to being our best friends, dogs still take the cup.

PHYSICAL REASONING GAME

In this game, Cyra demonstrated an excellent understanding of a fundamental property of the physical world - that one solid object cannot pass through another solid object.

Cyra had to infer that a piece of paper on an angle meant that a treat was hidden behind it. This talent would come in handy in the wild, since animals often have to keep track of objects that become hidden. To find these objects, animals have to maintain a representation of the object and predict where it might appear.

Humans intuitively understand basic physical phenomena like the solidity principle - it looks like Cyra does too.

Even though many dogs may struggle with physical properties like gravity, this doesn't stop them from thoroughly enjoying a game of fetch.

NEXT STEPS

We hope you've enjoyed reading Cyra's Dognition Profile and gaining fresh perspective on how she sees the world!

You can fill your friends in on what you've discovered about Cyra very easily. Download and email or print Cyra's profile report any time from your portal.

Of course, these five cognitive dimensions are only part of the picture; the magic of your relationship with Cyra is how you spend your time together. To that end, a Dognition membership gives you on-going games and tips that will help provide even more insight into what makes Cyra tick and how to act on that information.

As a member, each month you'll receive:

- A new game that will shed light on another aspect of how Cyra thinks and sees the world.

- Tips and activities prepared for Cyra from canine training experts based on how Cyra sees the world.

- Exclusive offers from Dognition partners, including brands such as Kong and Purina ONE.

- New findings about how all dogs think and how Cyra's strategies compare.

At the same time, by contributing to Dognition you and Cyra are helping to build the world's knowledge about all dogs. This allows us to tackle fresh questions -- how do certain breeds think compared to others? To what extent do memory skills decline by age? Are female dogs any more empathic than male dogs? And many more!

What questions would you like answered? We'd love any feedback on that or anything else related to Dognition. Contact us any time at hello@dognition.com.

Woof!

The Dognition Team

See the World Through Your Dog's Eyes

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