KOLCHAK

DOGNITION REPORT - JUNE 17, 2025

Dognition®

SOCIAL GRACES ARE THE KEYS TO THE SOCIALITE'S SUCCESS.

It's hard work making everything look so easy. In a culture obsessed with academic achievement, sometimes it is easy to overlook the fact that gracefully interacting and communicating with others requires talent. In Kolchak's case, he takes this talent to a whole new level - it is definitely his genius.

Although Kolchak is not as adept at independent problem-solving skills as other dogs, don't jump to any conclusions about his intelligence. Kolchak relies on a very specific strategy - using you and other humans in his pack to get what he wants. Judging from his performance in the social games, we suspect that most of the time this strategy succeeds.

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.

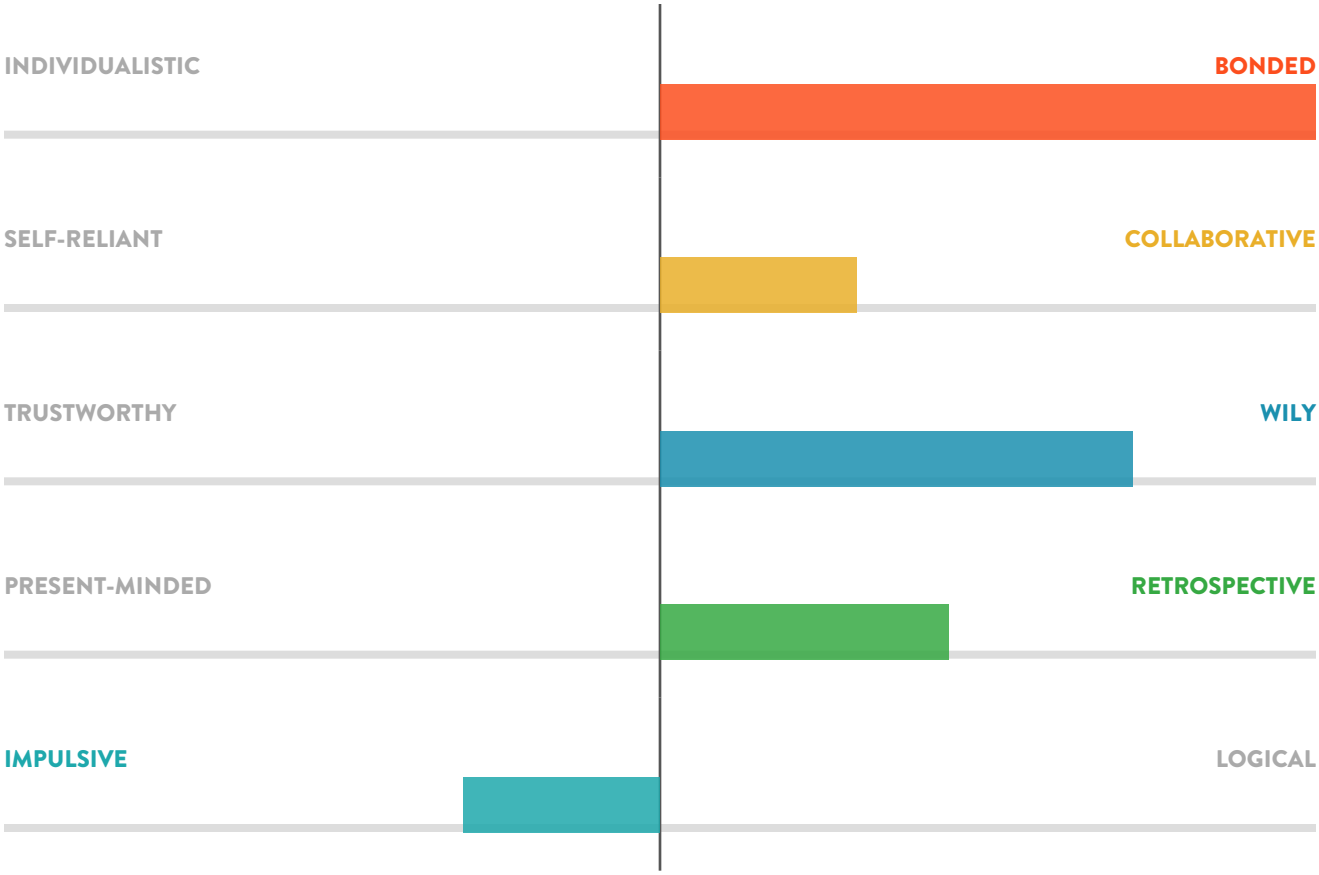
There has recently been a revolution in how we think about intelligence. The Dognition Profile is based on this cutting-edge field called cognitive science. Cognition is the study of how the mind works and draws on many scientific disciplines, from psychology to computer science to neuroscience.

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 he 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 Kolchak's mind and reveal his 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

Kolchak'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.

This is even more special because initial results suggest that small dogs like Kolchak tend to be more individualistic than large dogs. By being more on the bonded end of the scale, Kolchak certainly stands out from the small dog crowd. If most dogs are bonded to their owners, Kolchak 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

It is quite impressive that, during a limited amount of time, Kolchak yawned when you yawned. Humans 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. Contagious yawning is related to empathy scores in adults.

If Kolchak could take a human empathy test, he would probably score quite high! So far, only a few species besides humans have been shown to contagiously yawn. Although dogs may yawn when they are stressed, they also yawn socially. Contagious yawning has been seen in dogs, but not all dogs yawn. It looks like Kolchak is one of the empathetic ones.

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

EYE CONTACT GAME

In this game, you timed how long Kolchak 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 Kolchak spent gazing soulfully into your eyes, you probably often find him staring at you for no reason. You might wonder if Kolchak is trying to tell you something, like he is hungry, needs to go to the bathroom or has an opinion on what to do over the weekend. But Kolchak may not want or need anything - he may be just hugging you with his 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.

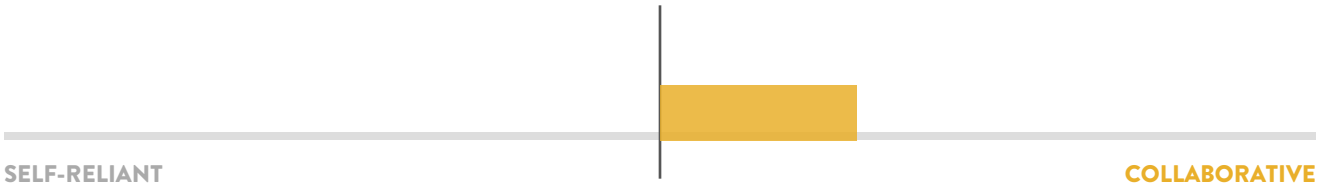
COMMUNICATION

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

Kolchak 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. Kolchak'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 requires are quite specialized. Dogs are one of the only animals that rely on human gestures - but even among dogs there is variation. Some dogs are more like infants and rely heavily on our communicative gestures, while other dogs are more like chimpanzees and try to solve problems on their own without our help. Kolchak seems to use a mixed strategy. Because Kolchak could see food in both places, he didn't really need your help, but occasionally chose to follow your gestures anyway.

Did you know that, on average, dogs can start following a human point as young as 6 weeks old?

FOOT POINTING

Just like in the hand pointing game, Kolchak thought he had better cover all his bases by sometimes choosing the treat you pointed at and sometimes striking out on his own.

Kolchak probably does not see you point with your foot very often, so this game was a way of seeing how flexibly Kolchak can read new gestures. Giving animals a new version of a problem they have seen before is a common tactic used to reveal what strategy they are using to solve a problem.

Although Kolchak did not follow you every time, he may have sensed your communicative intent, and would probably not need much practice to start using a range of new gestures.

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

It could be a tasty morsel left on a coffee table. Or a stuffed animal you've forbidden Kolchak to chew up. As soon as you aren't paying attention, whatever Kolchak has been lusting after mysteriously disappears. You might have wondered whether Kolchak is incapable of learning a tiny word like 'No!'

On the contrary - Kolchak has a keen mind and is not afraid to use it. The cunning games are based on research showing that many dogs use information about what you can and can't see when deciding how to behave - or, in some cases, misbehave.

Kolchak is the perfect example of a dog using cognitive strategies effectively. He knew he should wait when you were watching, and that it was safe to swoop in and take the treat when you had your back turned or your eyes covered.

The fact that Kolchak didn't wait as long to take the treat when your eyes were covered is impressive, since you looked almost exactly the same as when you were watching Kolchak - the only difference was that you had your hands over your eyes. Many animals can tell the difference between your front and back, but even some primates (like lemurs) have difficulty detecting the subtle meaning of covering your eyes. Kolchak's performance shows a sophisticated mind at work.

Interestingly, although chimpanzees would not do so well in the Communication dimension where gestures are cooperative, they do very well in games where they have to compete with or deceive a human. In fact, just like Kolchak, they can tell what you can or can't see, and use this social information for their own ends.

Kolchak's performance in the Communication dimension shows that he is excellent at using your social information to cooperate with you. His performance in the Cunning dimension shows that he is not above using this same social information to get his own way.

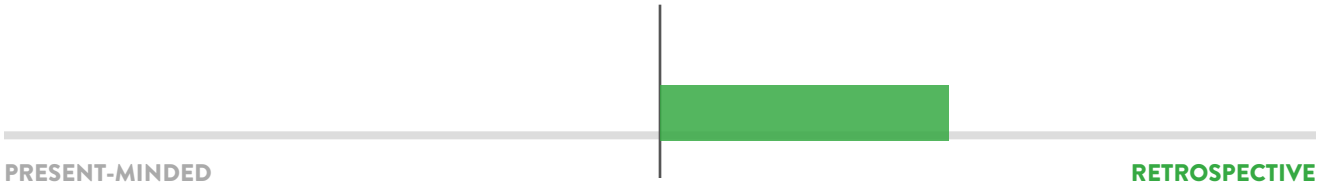
FIG.3

MEMORY

These games examined how heavily Kolchak relies on his working memory. Working memory is the kind of memory that allows your dog to keep information in mind for a few minutes and mentally manipulate it to solve problems.

In the memory games, Kolchak had to understand that even though the treat disappeared from view, it still existed, and it was his job to find it. It looks like Kolchak has a good working memory, but also uses other information, such as smell or social gestures, when making decisions and solving problems.

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

Kolchak was clearly trying hard to figure this one out. When he saw you hide the treat under one cup but point to the other cup, he wanted to use the information you were giving him, but he also knew what he saw. Rather than choose one strategy, he switched back and forth between the two, which shows impressive flexibility.

MEMORY VERSUS SMELL

Since dogs have such a keen sense of smell, you may have been surprised that after you switched the cups, Kolchak used his memory over his sense of smell. He went to where he 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 Kolchak's excellent working memory. After you hid the treat Kolchak 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

Kolchak is the kind of dog that likes to see all the pieces before he solves the puzzle. Reasoning is the ability to solve a problem when you can't see the answer and have to imagine the solution.

Kolchak scored more towards the impulsive end, which means he doesn't get caught up in the details - especially details that aren't right in front of him. There is no shame in this. The reasoning games are the most difficult in the Assessment and most dogs find them extremely challenging.

From Kolchak's performance in the Communication dimension, he relies on you for help when making decisions. He obviously sees you as his best bet when solving a problem.

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

This was probably the most difficult game, and Kolchak's performance was excellent. In this game, we presented Kolchak with a problem and you provided some, but not all, of the information needed to solve it. When you showed Kolchak the empty cup, you were providing indirect information on where the treat was - he had to make an inference that because that cup was empty, the treat must be in the other cup.

Just because Kolchak did not choose the cup with the reward, it doesn't mean that he failed. In fact, this shows a strongly cooperative nature. By lifting up the empty cup, you were actually drawing attention to it, and Kolchak preferred to choose this cup over the other. Kolchak views you as a cooperative partner and assumed that you were trying to help him by showing him the correct cup.

In the Communication dimension, Kolchak was highly responsive to your social cues. To Kolchak, you are the perfect partner in crime and he will turn to you any time he needs help.

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

Kolchak did seem to understand the principle of solidity - that one solid object cannot pass through another - at least some of the time.

Although this might have seemed like a simple game, it was actually quite complicated. First, Kolchak had to infer that you hid a treat (since Kolchak didn't actually see you hide it). Then he had to understand enough of the physical world to infer that a piece of paper at an angle indicated that the treat was hidden behind it. It is impressive that Kolchak figured out the answer as often as he did.

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

NEXT STEPS

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

You can fill your friends in on what you've discovered about Kolchak very easily. Download and email or print Kolchak'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 Kolchak 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 Kolchak 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 Kolchak thinks and sees the world.

- Tips and activities prepared for Kolchak from canine training experts based on how Kolchak 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 Kolchak's strategies compare.

At the same time, by contributing to Dognition you and Kolchak 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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