

Episode 24: Cognitive Gamer Cognalysis: Wingspan

Show Notes

Wingspan is a hot new boardgame that's rocketing up the boardgamegeek's rating chart. In this episode we take a look at some explanations of why so many people have become enamored with this game.

Game References

Wingspan

Research References

Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science*, 293(5537), 2105-2108.

Kahneman, D., & Egan, P. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

Salamone, J. D., & Correa, M. (2012). The mysterious motivational functions of mesolimbic dopamine. *Neuron*, 76(3), 470-485.

Transcript

Hello! This is Episode 24 of the Cognitive Gamer podcast. I am your host, Dr. Stephen Blessing. In this episode I'm going to do a cognalysis of a game that is currently pretty hot, Wingspan by Elizabeth Hargrave and published by Stonemaier Games. I was fortunate to get the first printing of the game, and have had a good time playing it over the last few months. It has intrigued me in a few different ways, and so I thought I would dive into those aspects in this cognalysis. If you haven't heard one of these cognalysis episodes before, I do a deeper look into one particular game, discussing what makes the game interesting from a cognitive and psychological viewpoint.

As I mentioned, I have enjoyed playing Wingspan, and my family and friends have liked it as well on a number of these play sessions. It has been interesting to see Wingspan really take off, pun intended I guess, from when I first became aware of it in late 2018 to its launch earlier this year to where it is now, number 59 on boardgamegeek.com and the number 2 family game. It has also seen success outside of the hobby gaming community, with mentions in newspapers like the New York Times. Even the Audobon society has taken note of it as well. It has a very active Facebook community, where members share how much enjoyment not only they themselves have gotten out of the game, but also the people who they have taught it to. And, these other people are often not traditional gamers. Part of what has interested me about this game is the psychological factor of this popularity, which I want to examine here first.

Part of this is due to how Jamey Stegmaier, the president of Stonemaier games, has marketed the game. He has been really great about announcing the game, putting out information about it, and making himself available to answer questions. And, while this wasn't intentional, the scarcity of the game at initial launch has probably also helped build up expectation, much like Nintendo launching a new game system. This has led me to think about how our emotions operate in general about games and while playing them, and how that might apply here with Wingspan. Modern psychologists of course have a lot of things to say about emotion, but I can actually go all the way back to Plato to kick off this part of the discussion, because the way he initially described how the mind worked in this regard has a lot more right than he had wrong, and I think applies here to how we get excited about games.

Indeed, Plato had a great metaphor he used to describe how the mind worked, at a very high level, that I think might be instructive here. He described the mind as a chariot, hooked up to two different horses. One horse roughly represents our emotions, that more irrational part of our mind, and the other horse is reason. The chariot driver, our mind, needs to reign both of these in as we navigate life. Now here's the cool thing, there are a number of current day dual process accounts of how the mind works, that take this basic blueprint as described by Plato around 400 BC. Joshua Greene and his colleagues proposed one in an influential Science article back in 2001, and Daniel Kahneman also proposed one in his 2015 book titled *Thinking, Fast and Slow*. In general these all posit, just like Plato suggested thousands of years ago, two routes into our mind, a more emotional path and a more rational path. And, there's neuropsychological evidence to back to this up. All information comes in through our senses, and most of that information goes through a part of the brain called the thalamus. There are two paths coming out of the thalamus. One path, sometimes referred to as the low road, goes through the amygdala and as expressed through our autonomic nervous system, our bodily responses. This is the emotional route, and as it turns out, the faster route. Being subcortical, this route is beneath our conscious awareness. It's particularly acute for something like fear. We see or hear something dangerous, that information comes in through our sensory processing, through the thalamus, and then quickly processed by our amygdala and before we are aware, our heart is racing, our palms are sweaty and we are ready to either fight or flee. It can also come into play for good feelings as well, when pleasant information comes into through our senses and we smile and start to relax before we are consciously aware of it.

But, as I said, there are two pathways coming out of the thalamus. The second path, the high road, goes up into cortex, the more rational part of the brain. The amount of cortex that humans have is what separates us from other animals. We have substantially more cortex, that's the outer covering of the brain, such that when you look at an intact brain, almost all you're seeing is cortex with all of its folds and creases. The amount of cortex that we have gives us the ability to learn language, use tools, and of course play sophisticated games, much more so than any other species. For better or worse, though, it's slower than the emotional route. It takes a few beats longer to kick in. So, we have that emotional response, and then only a few ticks later can think more rationally about it.

We could have a whole podcast or two about emotion and its various theories, and we probably will someday, but that's enough to get going. I believe you can see how it fits into our discussion of Wingspan. I'm taking a little bit of a license here in viewing this through the lens of a dual

process account, but at a larger level, splitting our processing into an emotional and a cognitive component applies here. The excitement that we feel when a new game is announced, one that we feel we are particularly going to like, and seeing the community get hyped about it feeds into that one horse, the emotional one. Remember, that's the quicker route. We'll feel it first. And, that continues when we actually see the game. It's gorgeous. The art by Ana Maria Martinez Jaramillo, Natalia Rojas, and Beth Sobel is awesome to look at, the components are top notch including a realistic birdhouse dice tower, and even the instruction book's paper has a linen finish. All that information is going through our senses and routed through our amygdala, giving most of us a good feeling, before we consciously process the game. This helps to give people a positive first impression of the game.

Wingspan though does have the cognitive fortitude to back up those positive, emotional, first impressions. I don't think I've seen a truly negative review of the game. As with most games, there are of course differing opinions, but at worst I think I've seen reviewers say that while they do have a positive opinion of it, it wasn't quite for them, because they wanted a heavier game or they thought other games did certain game mechanics slightly better. I've read many reviews that are quite effusive about it, and of course there's the data that the game has already broken well into the boardgamegeek's top 100, and almost into the top 50. Indeed, when I first started to think about this podcast, it was at 69 I believe, and I've had to adjust that number as it has gone up the chart. Good reviewers are supposed to look beyond the glitz and hype, and if it truly was style over substance, that would have been sniffed out by people's personal ratings of the game. So, once people have had time to cognitively engage with the game, taking the high road of mental processing so to speak, it has largely backed up the information they received from the quicker, emotional processing that has already been managed. It's often worth it, though, to try to keep that speedy irrational horse in check, because it's easy to let it get away from you when all the hype starts to hit and the wallet comes out before the rational part of the brain kicks in and cautions against getting swept away.

As I said before, Wingspan does have many interesting cognitive aspects going on when you get to playing it. Being an engine building game, one main component is of course decision making, as you decide how best to construct your engine, given the cards you have in your hand. Should you concentrate on birds that get you eggs, or ones that cache food, or should you go for the higher point cards in lieu of the smaller point cards that may be able to get you points later on. There are a lot of decisions to be made here. I've already had some podcasts about the heuristics we use when we make decisions, so I'll encourage you to take a listen to episodes 14, 17, and 21 to review those. If you remember, these different heuristics started as the work of Amos Tversky and Daniel Kahneman, and I mentioned Kahneman's name earlier as a researcher who had proposed a dual process account of thinking. One big heuristic that I believe comes into play with Wingspan is the availability heuristic, the one discussed in episode 14. As discussed then, we tend to make current decisions based off past decisions that have been previously useful, and that we can recall readily into mind. If following a strategy of say getting a lot of eggs gave us a lot of points in the past, we are more likely to pursue that strategy in the future.

I also find there's a bit of a puzzle aspect to playing Wingspan, particularly in the later rounds. The game has a nice mechanic where you get fewer turns as you go through the rounds. You only have 5 turns during the last round, so it's a bit of puzzle as you figure out how best to order

your turns in order to maximize your points. Given my love of puzzles, I personally like that aspect of the game, as you have to consider how best to make use of that limited resource. If you have a good engine going, it might be obvious what the best moves are, but in general, I have found there are like 4 things I would like to do my last 3 turns, so I have to figure out which one not to do, and then how to sequence the 3 things I can do.

Let's talk a little bit about the engine building aspect of Wingspan and what people find attractive about it. As you place birds on your player board, you are able activate those bird's powers as you take the action in their row. Some birds have powers that complement each other quite nicely, such as one that allows you to take a card from the deck and another bird that allows you to tuck a card. By placing those cards strategically, you can build up an engine that allows you to create end game points as you take actions. Running through those actions on your turn make you feel good as you do them, because you have just created some points for you. Of course, not all activated cards have a synergy between them, but even those, like those predator birds where there is a chance you may be able to tuck a card underneath them, will still give a player a thrill when they look at the next card in the deck to see if the predator gets to tuck a bird underneath.

In explaining this feeling you get as you run your engine, earning points for yourself along the way, I'm going to go a little bit into the biology of the brain here, like I did when I talked about the dual process model. We have a pathway in the brain referred to as the mesolimbic pathway, which is composed of the amygdala, which I mentioned before with emotion, the hippocampus, which helps out with memory, the prefrontal cortex, which aids in decision making, along with a couple of other neural circuits. When something rewarding happens to us, a neurotransmitter called dopamine gets released into that pathway. When that happens, we feel good and we are reinforced for that behavior. That means we're likely to do it again, because we like that pleasurable feeling. I imagine we get a couple of hits of dopamine as we activate the birds in one of our habitats, and that's partly why running an engine like this in these sorts of games is so satisfying. We're being chemically rewarded when a predator is successful and we tuck a card or when we get to place eggs and food, and draw more cards. It can be somewhat intoxicating, and we can't wait to do it again. And, thanks to relatively short turn times in Wingspan, it won't be long. Of course, this also explains addictive behavior to things like slot machines and nicotine, so be careful playing Wingspan and running those engines late in the game!

The last part about Wingspan I would like to mention is I believe one that has helped to bring in a lot of non-gamers to play it. Elizabeth Hargrave is a bird watcher, and the knowledge she has of birds from that hobby is on full display in the game. While concessions had to be made in order to make it a game, the way the birds are played and presented in the game has a fair amount of accuracy to these birds in real life. As a cognitive psychologist, I would be interested in how that authenticity plays out in a player's cognitions and how that might affect their desire and knowledge to learn about birds. I've heard a lot of stories about how non-gamers who happen to be birders have heard about the game, played it, and enjoyed it. That might lead them to investigate more hobby board games. I'm personally more interested though in the other way around, gamers who are non-birders, but because they have played the game, get more interested in bird watching. As for myself, I've taken a bit more interest in the birds around me after having played the game. As a native of Illinois who now lives in Florida, I have had some fascination

with the birds we have down here like sandhill cranes, ibises, and spoonbills that I never saw growing up. But, by going through the cards in Wingspan, I've started to wonder even more about them, like about their nests, how many eggs they lay, and what they eat. Indeed, this past weekend I was with a school group who went to the Merritt Island National Wildlife Refuge, an area around Cape Canaveral that NASA turned over as a nature preserve. They showed us a short film that went into the numerous birds in the area, and as it talked about the Cooper's Hawk and scrub jay I could map that information to mechanisms in the game. If I did want to take the next step and become a more serious bird watcher, I imagine if there would be some advantages, perhaps subtle but maybe not, to my ability to learn about this new hobby because of my experience with Wingspan. As they say, that would be an empirical question. If you noticed this happening to you, please drop me an email!

That brings us to the end of another episode of Cognitive Gamer. Even though this one was specifically about the new game Wingspan, I imagine you can see how what we discussed could be applied to a number of different games. Indeed, the whole dual process of how we process our emotional and rational thoughts come into play not only with games, but also life in general. And, those little hits of dopamine happen whenever we encounter something rewarding, either in a game or real life.

As always, I welcome any comments or questions you may have, so please email me, steve@cognitivegamer.com and also visit my website, cognitivegamer.com. Also, you can like me on Facebook, Cognitive Gamer, or follow me on Twitter, [@cognitive_gamer](https://twitter.com/cognitive_gamer).

I'd appreciate it if you took the time to give this podcast a rating and a few kind remarks on iTunes or wherever you listen to Cognitive Gamer. This will make it easier for other people to discover the podcast. I appreciate those 5-star reviews! Until next time, remember to think about what you play, and have fun doing it.