

Dunning-Kruger and Imposter syndrome: a reflection from my PhD

How Impostor Syndrome and the Dunning-Kruger Effect Affect academics and everyone else



Arthur Netto · [Follow](#)

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After becoming a product manager, I discovered that my Ph.D. gave me lots of skills to deal with the daily routine of startup challenges. However, one that I get myself thinking about a lot is how academia taught me to balance my real knowledge and my perceived knowledge. Or, in more simple terms, I think a lot about the

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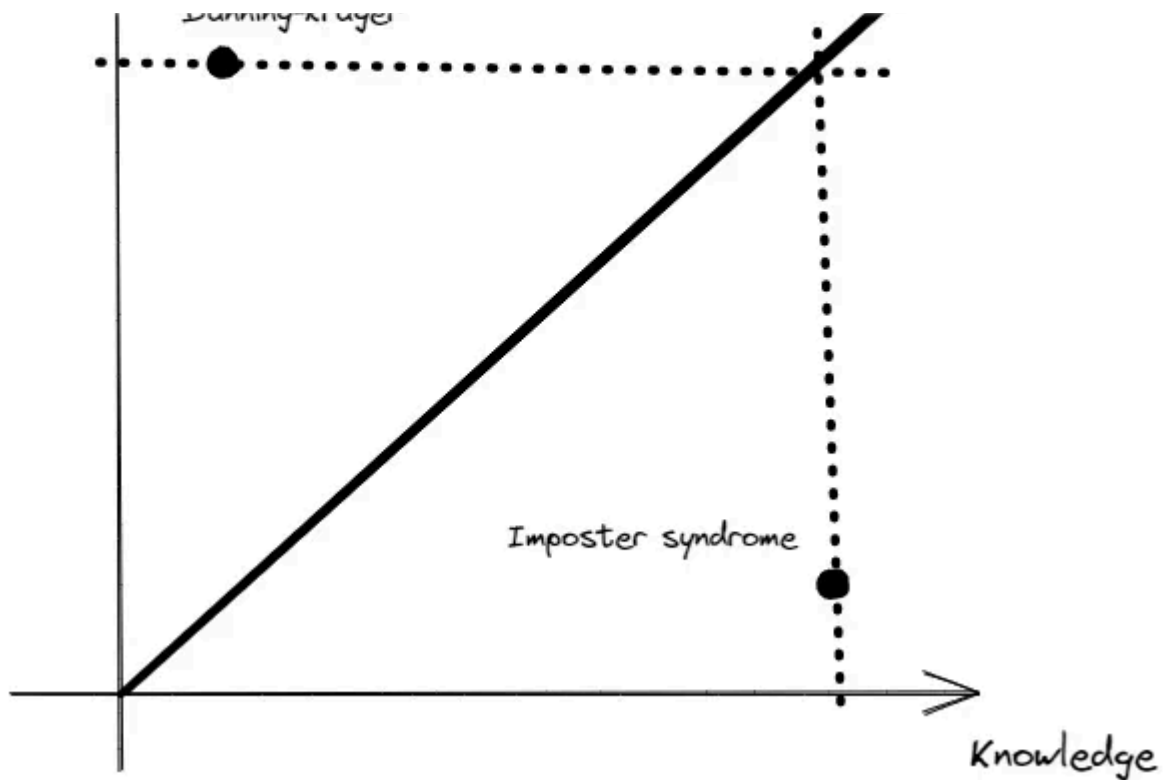
biases: imposter syndrome and the Dunning-Kruger effect. LinkedIn and the corporate world taught me about them.

In academia, we learn about imposter syndrome and the Dunning-Kruger effect the hard way. Most academics don't have LinkedIn and are limited to Twitter bubbles that treat confidence issues with disdain, especially lack of confidence. Thus, they keep their knowledge-trust issues behind the door.

Imposter syndrome and the Dunning-Kruger effect are well-known topics on LinkedIn, but not discussed enough in academia. In the corporate world, they are usually discussed separately (maybe because it yields two posts rather than one), but they are two sides of the same coin.

Confide

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As shown in the graph, the Dunning-Kruger effect happens when we are overconfident compared to our knowledge. Imposter syndrome, on the other hand, occurs when we are too humble about our knowledge and feel like we don't know enough.

Strictly speaking, Dunning & Kruger (1999) “across 4 studies, [...] found that participants scoring in the bottom quartile on tests of humor, grammar, and logic grossly overestimated their test performance and ability”. The effect has been replicated and found to be true in other scenarios. A famous 1981 survey found that 80% of drivers think of themselves as better than average drivers (even though this is mathematically impossible). This has become a frequently cited result of the Dunning-Kruger effect.

Everyone has faced the Dunning-Kruger effect at least once. If you are like most, beyond thinking you're a better driver than the average, you have scrolled through some cooking Instagram, then read two recipes from google, and thought you were a cooking master. However, your expectations probably ended up far from reality. You found out the hard way that two recipes don't scratch the surface of cake mastery and your cake did not please your or your friend's tastes.

In contrast, imposter syndrome lies in the opposite quadrant of the graph. Impostor syndrome is the feeling of being exposed as an imposter despite evidence that they are quite accomplished. Although not classified as a proper disease, imposter syndrome is a well-researched psychological phenomenon.

Impostor syndrome materializes when you are actually a cake master, but believes that your cakes are not good enough. Or, when you are an F1 driver but believe you can't drive through the streets in a regular car.

Both effects can be experienced by anyone, regardless of their level of success or competence. Thus, both effects should be discussed broadly. They are cognitive distortions that may affect our emotions and productivity.

Embrace the journey

You may now be thinking: “ok, quite interesting cognitive distortions, but what do I do about them?” Well, chatGPT gives some useful tips:

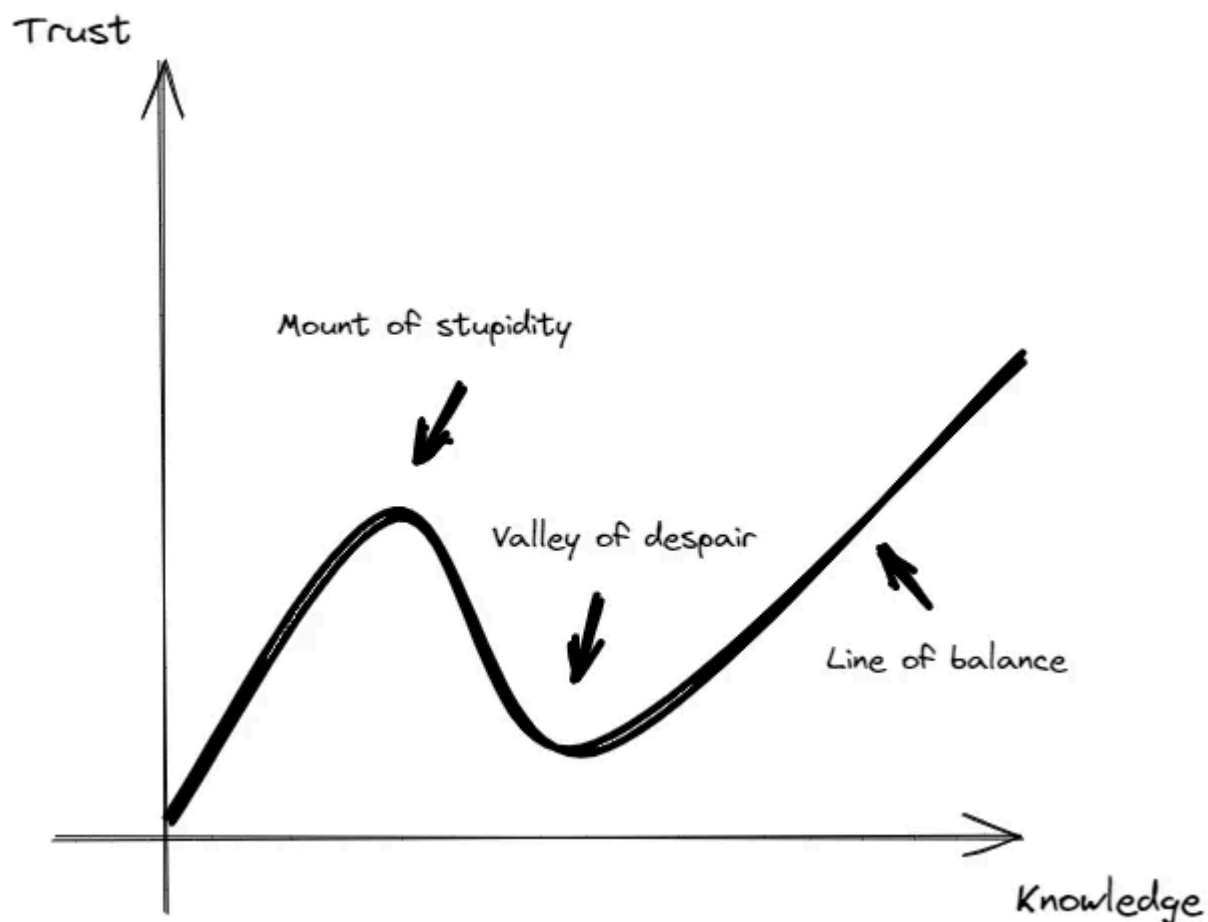
1. **Acknowledge Your Feelings:** Recognizing and accepting your emotions can help you confront and address imposter syndrome, while acknowledging limitations can help combat the Dunning-Kruger effect.
2. **Reframe Your Thoughts:** Changing negative self-talk to positive and realistic self-talk can help combat imposter syndrome and the Dunning-Kruger effect.
3. **Set Reasonable Goals:** Setting achievable goals can help combat imposter syndrome and the Dunning-Kruger effect by providing a realistic gauge of success and preventing unrealistic expectations.
4. **Seek Support:** Receiving support from peers or mentors can help alleviate the feeling of being an imposter, while gaining feedback and constructive criticism can help combat the Dunning-Kruger effect.
5. **Take Action:** Taking action towards your goals can help boost your confidence and combat imposter syndrome, while taking time to learn and improve can combat the Dunning-Kruger effect by humbling your perception of your own expertise.

This are actually great advice and I wish I had received them early on in my career.

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The graph depicts the relationship between confidence and knowledge in a different manner. It shows that while knowledge accumulates, confidence does not go along. The graph has three different points in the journey of knowledge accumulation: the mount of stupidity, the valley of despair, and the line of balance.

These points are pretty much unavoidable in the journey of learning. I learned it the hard way when studying different topics for my research.

Given the lack of talk about imposter syndrome and the Dunning Kruger effect in academia, during a PhD, instead of reading about these cognitive distortions, we experience the whole journey several times. More specifically, we experience distortion in our knowledge-confidence ratio at least once per chapter, be it the Dunning-Kruger effect or imposter syndrome.

Also, the whole PhD journey puts us on a roller coaster of knowledge-confidence. We arrive at our universities on the first day quite humbly. We think we are great

since we've been selected but also that there's much to learn. First-year in, and is hard to not think that our thesis will grant us at least a Nobel prize. Hello, Dunning-Kruger!

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impossible
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Then we face the first committee. We present our work in seminars and we even submit our papers to journals. Most of us get harsh feedback. We realize that our perceived knowledge was not aligned with our real knowledge, and we start to doubt ourselves. We may experience imposter syndrome, feeling like we are not good enough and that our accomplishments are not significant.

But this journey is necessary. It allows us to learn from our mistakes and grow our real knowledge, which ultimately leads to a more balanced relationship between our confidence and our knowledge. It's important to acknowledge that this journey is not easy, but it's worth it.

So, my additional tip beyond what GPT's ideas is to embrace this journey. Don't be too hard on yourself when you experience imposter syndrome or the Dunning-Kruger effect. Instead, use these experiences as opportunities to reflect on your knowledge, seek support, and set reasonable goals. Remember that everyone goes through this journey, and it's a necessary step toward growth and development.

Understanding imposter syndrome and the Dunning-Kruger effect is important, especially for those in academia. By acknowledging these cognitive distortions and embracing the journey of knowledge accumulation, we can overcome them and become more productive and successful in our careers.

Over time, as individuals gain more knowledge and experience in their field, they may begin to normalize their confidence-knowledge relationship. They may come to understand their strengths and weaknesses and recognize that their abilities are not fixed but rather can be developed through hard work and dedication. This increased self-awareness can lead to a more realistic sense of confidence, which can allow individuals to make informed decisions and pursue their goals with greater certainty.

In conclusion, the journey of an individual during their PhD can be a dynamic process of self-discovery and development. Through the experience of the Dunning-Kruger effect and imposter syndrome, individuals may gain a more nuanced understanding of their abilities and develop a more balanced relationship between their confidence and knowledge.

PhD

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I think the Dunning Kruger effect is worse than the imposter syndrome. People who don't realize how dumb or wrong they are can weaponize their thoughts and subsequent actions. Imposter syndrome is just a healthy dose of self-doubt that a good TED talk can fix. Great article and very readable for an academic exposition.



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Nathan Laundry

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Love this insight! Thanks for sharing!



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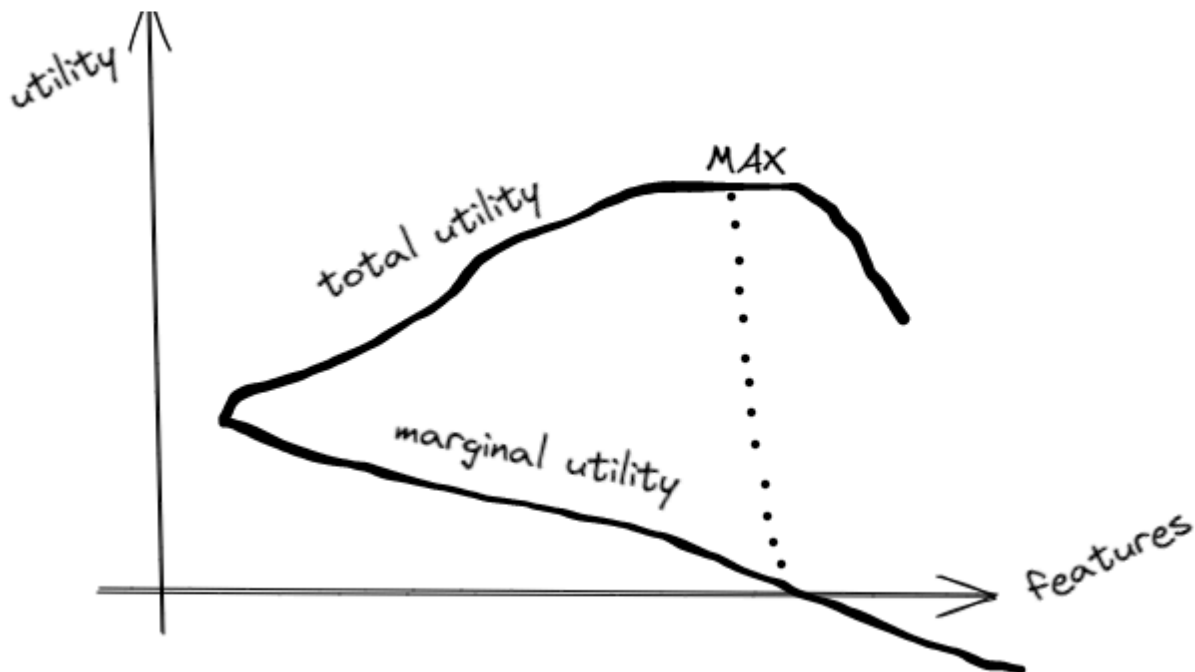



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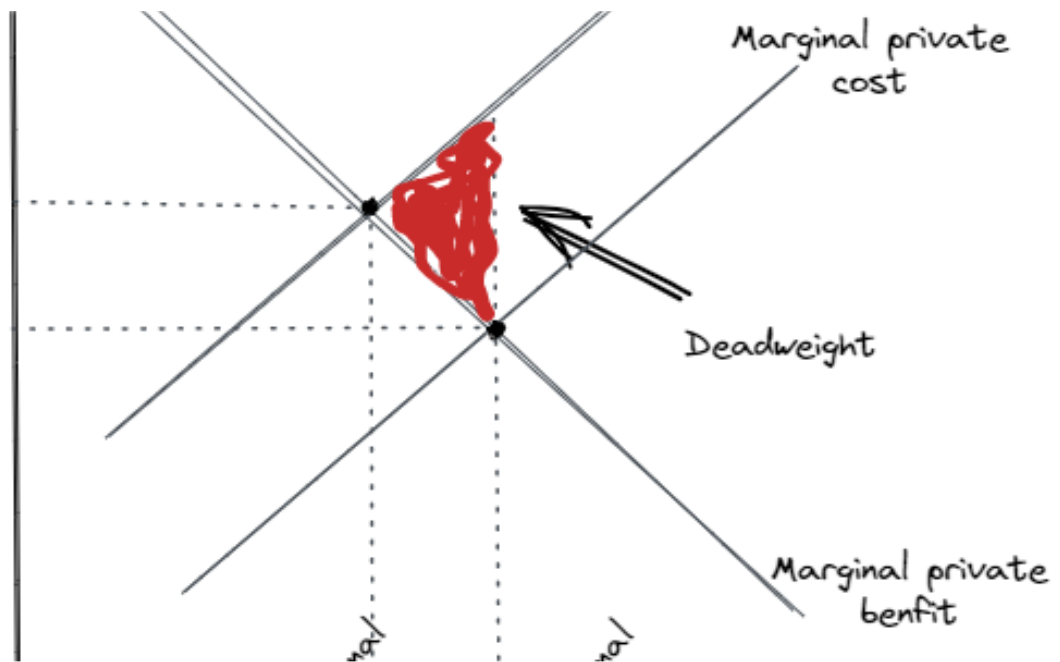
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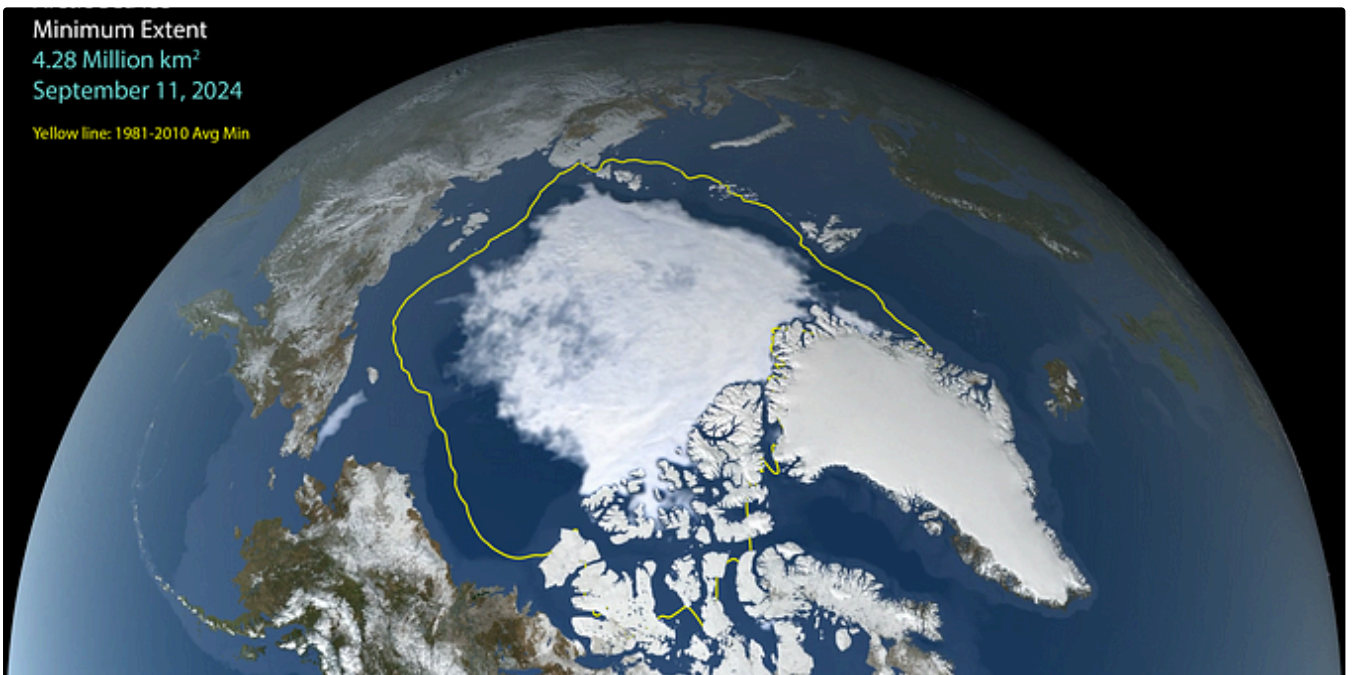
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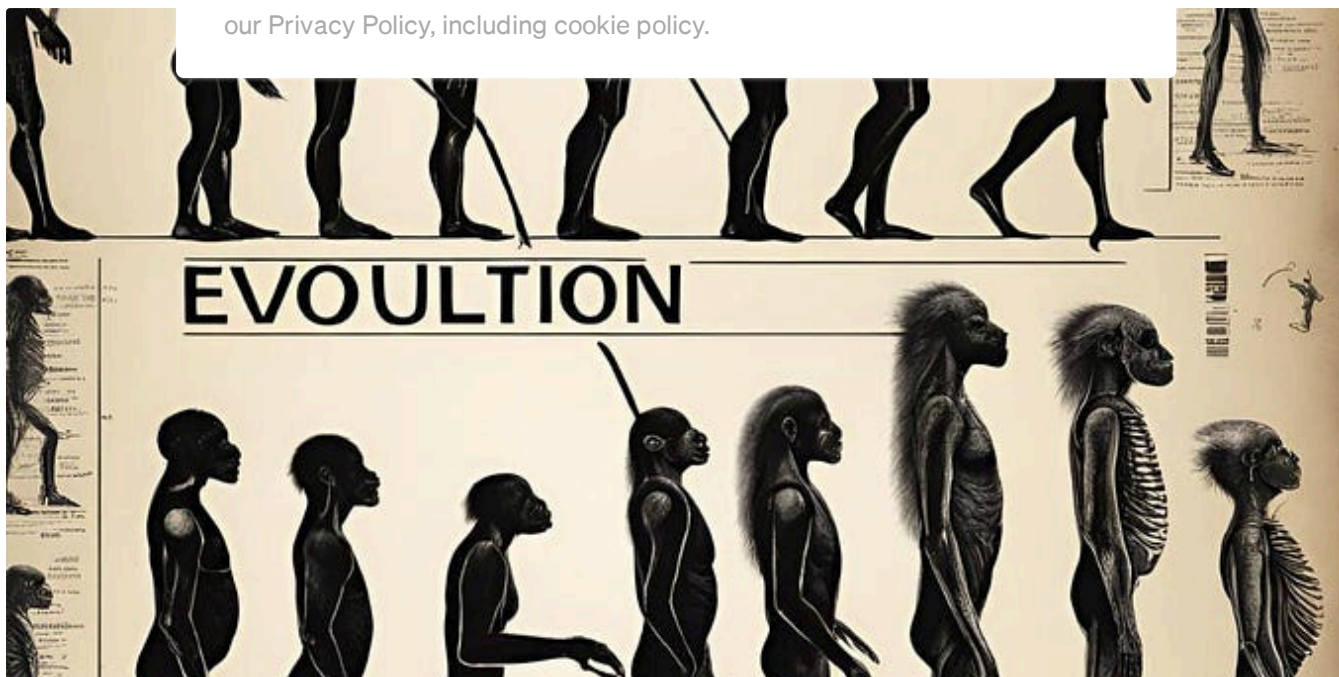
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