

<https://www.lagaligoliveboard.com/diving-and-the-dunning-kruger-effect/>

Diving and the Dunning Kruger Effect: Definition & Examples

Nick Barr

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The Dunning-Kruger effect is a cognitive bias in which people with low ability at a task overestimate their ability. Conversely, those with high ability at a task may underestimate their own competence. This phenomenon can have significant implications in various aspects of life, from personal relationships to professional environments. In this article, we will explore the definition of the Dunning-Kruger effect and provide examples to illustrate how it manifests in real-life situations related to diving. We will also discuss the potential consequences of this cognitive bias and ways to mitigate its impact.

What is the Dunning-Kruger effect?

The Dunning-Kruger effect is a cognitive bias in which individuals with low ability at a task overestimate their ability. This occurs because they lack the metacognitive skills to assess their own competence accurately. Instead, they often exhibit unwarranted confidence in their abilities. This can lead to a hindrance in seeking improvement or learning from others, as they may not see the need for it due to their inflated self-assurance.

One classic example of the Dunning-Kruger effect can be seen in the field of driving.

Research has shown that individuals who are less skilled at driving often rate themselves as more competent compared to others. This overestimation of their abilities can lead to dangerous driving behaviours and a lack of willingness to improve through further training or education.

In addition to driving I think we can all recall examples of when we have also seen this in diving. The open water student who has just got his licence. Although they know they are supposed to stick to 18 metres, they head to the local dive shop with their friends, rent some tanks and take their own boat out on a 35m wreck dive. Over confident, this person does not know the dangers of Nitrogen narcosis, especially when in the confined space of a wreck.

Understanding the Dunning-Kruger effect can be the first step in overcoming it. By cultivating self-awareness, seeking feedback from others, practising humility in our expertise, and doing follow up dive training courses individuals can begin to mitigate the impact of this cognitive bias. Being open to learning from others, including instructors

and more experienced divers and valuing constructive criticism can also contribute to overcoming the Dunning-Kruger effect.

Understanding the Dunning-Kruger Effect

The Dunning-Kruger effect is named after psychologists David Dunning and Justin Kruger, who first described the phenomenon in 1999. This effect occurs due to a lack of metacognitive ability, which is the capacity to recognize one's own incompetence. Individuals who are less skilled in a particular area often lack the knowledge to assess their own performance accurately, leading to overestimation of their abilities. Difficulty in communications underwater can exacerbate this. Maybe your buddy is doing something wrong that you can not effectively communicate underwater with hand signs, and by the time you have hit the surface after the dive up to an hour has passed and you forget to raise it with them.

On the other hand, individuals with high expertise in a given task may underestimate their abilities because they assume that others possess similar knowledge and skills. This can lead to a lack of confidence and reluctance to showcase their competence. This is probably more your Divemaster realm, experienced enough to have the knowledge, but not at the point where you have taught hundreds of students like an Instructor, so have that reassurance that you are well advanced of most other divers you meet.

Understanding the Dunning-Kruger effect is important because it can impact decision-making, problem-solving, and overall performance. It is crucial for individuals to be aware of this bias and actively seek feedback and self-reflection to gain a more accurate understanding of their capabilities. As a recreational diver or professional diver you should reflect on exactly where you sit on the spectrum as you read this article. In the next section, we will delve into real-life examples to further illustrate this effect.

What are the causes of the Dunning-Kruger effect?

The Dunning-Kruger effect is caused by a lack of metacognitive ability, which is the ability to reflect on one's own knowledge and skills. People who are affected by this cognitive bias often overestimate their abilities because they lack the expertise to recognise their own incompetence. Additionally, those with limited knowledge on a subject are unable to accurately assess their own performance, leading to a false sense of confidence. As a result, individuals may exhibit unwarranted self-assurance, ultimately hindering their ability to seek improvement or learn from others.

Are You Less Competent Than You Think?

Examples of the Dunning-Kruger effect can be found in various contexts, such as in the workplace, in academic settings, and even in everyday life, and of course why we are here – Scuba Diving. For instance, a person may believe they have a deep understanding of a complex topic when, in reality, they have only a superficial grasp of it.

Understanding the Dunning-Kruger effect can help individuals become more aware of their own limitations and seek out opportunities for growth and learning. By recognizing the potential for overestimating one's own abilities, individuals can take steps to acquire the necessary knowledge and skills to truly become competent in their respective areas. This cognitive bias can have significant implications in decision-making and problem-solving. For example, an individual may confidently make decisions based on limited information, leading to suboptimal outcomes. I don't need to tell you how dangerous this could be when it comes to diving. In academic settings, students may overestimate their comprehension of a subject, leading to poor performance on assessments, which also applies to students of diving courses.

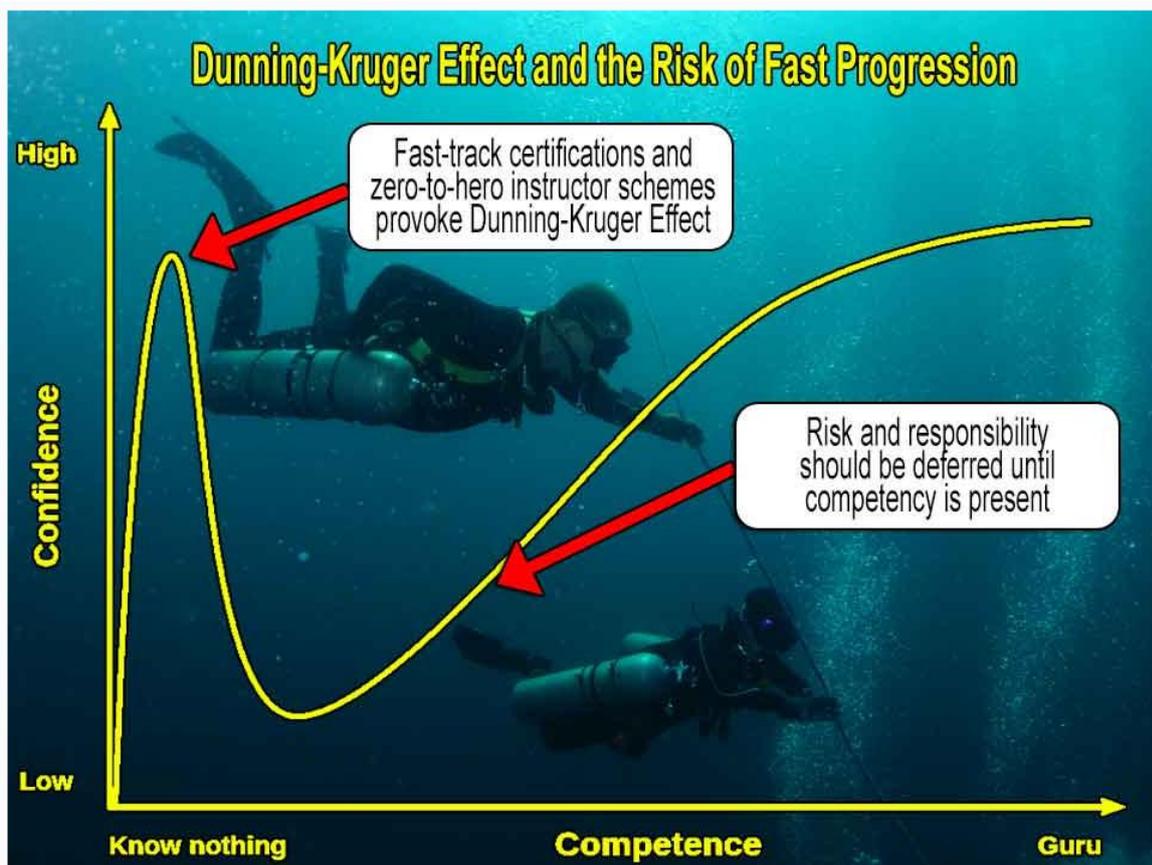
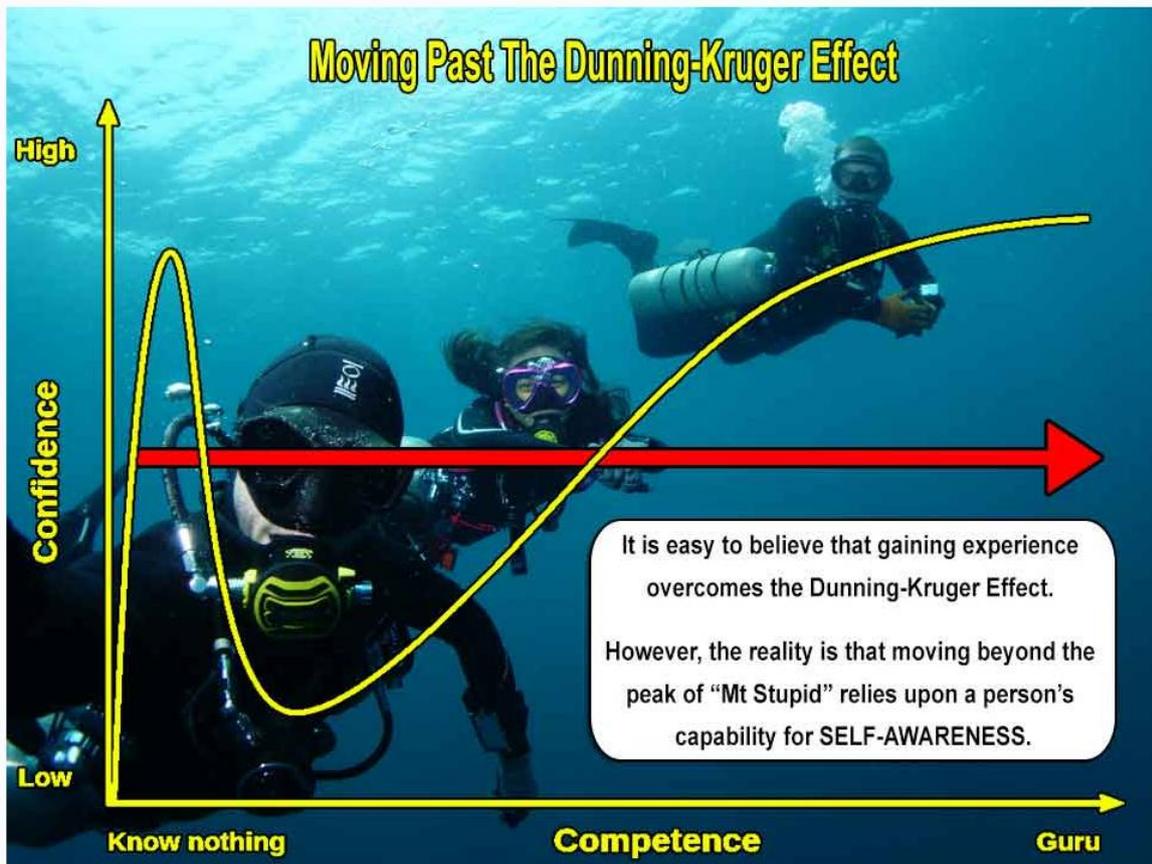
To combat the Dunning-Kruger effect, individuals can engage in practices that promote self-awareness and reflection. Seeking feedback from peers and experts, actively soliciting constructive criticism, and consistently evaluating one's own performance can help mitigate the impact of this bias. Additionally, fostering a mindset of continuous learning and humility can support individuals in recognising and addressing their own limitations. Although PADI does cop a lot of flack as "Put Another Dollar In" for the number of courses they constantly push, when you think in this perspective it is actually a good thing for the safety of all divers. By creating a mindset of constant improvement and learning, it makes the dive industry as a whole, a safer place.

Recognizing the prevalence of the Dunning-Kruger effect underscores the importance of fostering a culture that values self-awareness, growth, and expertise. Acknowledging our own limitations and actively striving to expand our knowledge and skills is crucial for personal and professional development.

How can you overcome the Dunning-Kruger effect?

To overcome the Dunning-Kruger effect, it is important to cultivate self-awareness and openness to feedback. Developing metacognitive skills through self-reflection and seeking input from others can help individuals gain a more accurate understanding of their abilities and knowledge. Engaging in continuous learning and remaining humble about one's expertise also plays a crucial role in mitigating the impact of the Dunning-Kruger effect. Furthermore, encouraging a culture of constructive criticism and valuing expertise in others can contribute to minimising the effects of this cognitive bias. Don't just surround yourself with yes men, and leave your ego at the door to take on what others say. We will all have a better dive industry because of it.

Illustrationen zum Thema:



Be wary of divers, and especially instructors, who certify through zero-to-hero schemes. They will be at the peak of Dunning-Kruger and cannot appreciate risks and responsibilities.

<https://indepthmag.com/my-deep-dive-into-the-dunning-kruger-effect/>

My Deep Dive Into The Dunning-Kruger Effect

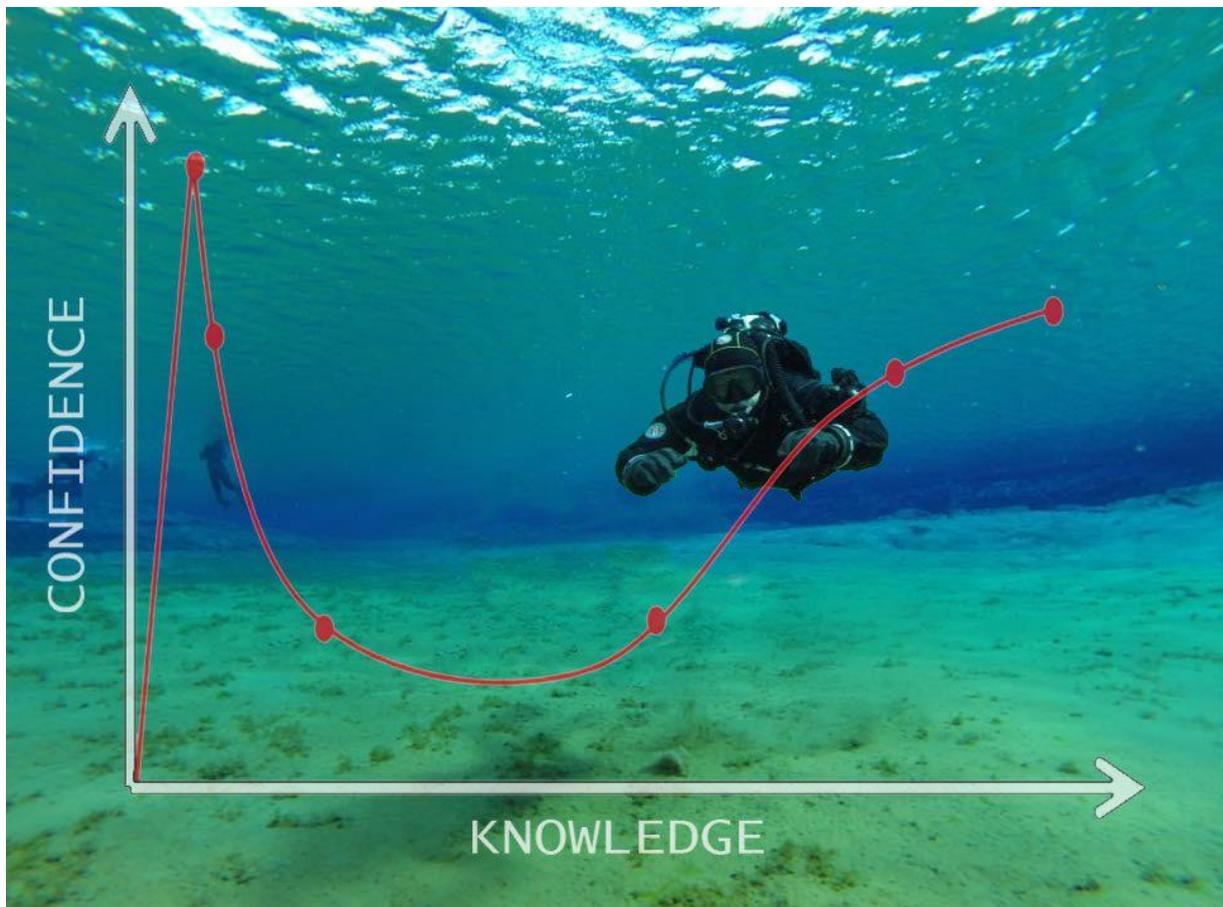
Tech diver Brendan Lund shares his personal diving journey from summiting Mount Stupid and descending into the depths of Despair on trimix, before finally beginning his ascent on the Slope of Enlightenment. No Kool-Aid was involved in the making of this story.

Published

5 years ago

on

November 1, 2020



by Brendan Lund

Images courtesy of Brendan Lund



Lund diving in Socorro, Mexico,

I started diving in 1996 as a poor student in South Africa. I absolutely fell in love with diving, and haven't stopped since. After moving to the UK in 2001, I finally started earning money and was able to dive more frequently. At this time, the Red Sea was starting to boom, and I was able to book a full week of diving—including flight and accommodation—for as little as 350 GBP! Many trips later, I became interested in tech diving, as it was the happening thing, and in 2004 I decided to begin my tech journey with a leading agency. This also signals the start of my journey with the Dunning-Kruger Effect!

Grokking Dunning-Kruger

I first saw the Dunning-Kruger effect graph a year or so ago and couldn't stop thinking about its relationship to my diving.

What is the [Dunning-Kruger Effect](#)? Here's what Wikipedia has to say:

In the field of psychology, the Dunning–Kruger effect is a cognitive bias in which people with low ability at a task overestimate their ability. It is related to the cognitive bias of illusory superiority and comes from the inability of people to recognise their lack of ability.

As described by social psychologists David Dunning and Justin Kruger, the bias results from an internal illusion in people of low ability and from an external misperception in people of high ability; that is, 'the miscalibration of the incompetent stems from an error about the self, whereas the miscalibration of the highly competent stems from an error about others'.

The graph below simplifies this concept—again, this is taken from the internet, but the wording pretty much sums up what I have been feeling throughout this journey:

The less knowledge you have, the more confident you feel. The more you learn, the less confident you feel.

The View from Mount Stupid

In 2005, I progressed from an advanced nitrox diver to a fully-certified advanced trimix diver. My instructor was a well-known deep diver at the time, and I was super impressed with the courses. I was at the point of Mount Stupid on the graph. These courses were not a pass/fail style of course; you just had to prove you could complete the skill once, and bam! You're qualified!

"Wow, I'm the man! I've passed my Advanced Trimix Course and dived to 100m."

I dug out the photo below from a box in the shed. We had someone take an underwater photo of us celebrating our successful completion of our deco procedure course. As you may notice, trim was not a requirement at the time (I'm now hiding my face with embarrassment)! Apologies to my buddies in the photo; it was a while ago, and the instructor is the only one in reasonable trim!

Class celebrating the completion of a deco procedures course.

To say I was chuffed is an understatement! I immediately went tech diving as much as possible. In 2008, I decided to travel the world for a year—diving of course. I met many amazing people and dived everywhere; I also became an instructor with a well-known recreational agency. I was at the top of my game (or so I thought), although I still don't think I had any trim! I mean, who needs trim, right?

On one of my adventures, I met a guy who was really interested in checking out a new agency that he had heard of. This would be the first time that I heard about Global Underwater Explorers (GUE). After much research and reading internet forums for GUE in 2000, I believe the Dunning-Kruger realisation phase of my journey began: I thought, "There is definitely a lot more to this!"

The Slope of Despair

I'm not going to lie; the more I looked into GUE, the more nervous I got, and the more I slid down the slope of despair. It took me a good six years to build up the courage to sign up for a Fundamentals class, and I showed up on that day feeling very confident in my brand new drysuit and my horseshoe wing. Wow, did I learn that I was way out of my depth! I was in trouble. It was so much harder than I had ever imagined. I don't think it was so much the course that was hard, but that it was hard for me to overcome my ego and overconfidence.

I received a provisional "Tech Pass" [i.e., I qualified to take GUE's Tech 1 or Cave 1], and it felt like I had failed! I was at the bottom of the Dunning-Kruger slope of despair. Was I ever going to get it? I questioned whether I should go back to get my pass, and I have to thank my buddies Nikky and Darren for encouraging me to do so. After lots of practice and some gear tweaks, I felt like I smashed it, and achieved my Tech Pass! Was this the beginning of the slope of enlightenment? Things were starting to make sense!

The Slope of Enlightenment



I have now completed two more GUE classes—DPV1 and Cave 1—and am signed up for Tech 1 next year. The future looks bright! I dive as often as I can with like-minded divers, and I realize that there is always more to learn and areas where I can improve. I am hopeful that I am now on the Slope of Enlightenment; it certainly feels that way. I highly recommend GUE to any divers that would like to work on themselves. It has definitely helped me on my diving journey, and I now look forward to many more years of diving and learning. I can't wait to get involved in more projects and extend my skill set.

<https://scubadiverlife.com/training-fundamentals-dunning-kruger-diver/>
[Marcus Knight Health In the Water New to Scuba Training](#) Dec 30, 2017

Often, dive accidents and incidents are due to the Dunning-Kruger effect. We define this as diver error caused by the dissonance between the diver's overconfidence in his own abilities and his *actual* abilities. What are common signs of a Dunning-Kruger diver, and how do you avoid becoming one?

Diving is a very safe sport, with quite a small number of serious injuries and fatalities.

1.6 Characteristics of Dives

Figure 1.6-1 shows the type of diving activity during the fatal dive. Information for the type of activity was available for 66 cases (97%). Two cases did not have activity listed. Forty-five (66% of cases) of the fatal dives involved pleasure or sightseeing, 14 cases (21%) involved spear fishing, hunting or collecting game, and 8 cases (12%) involved training.

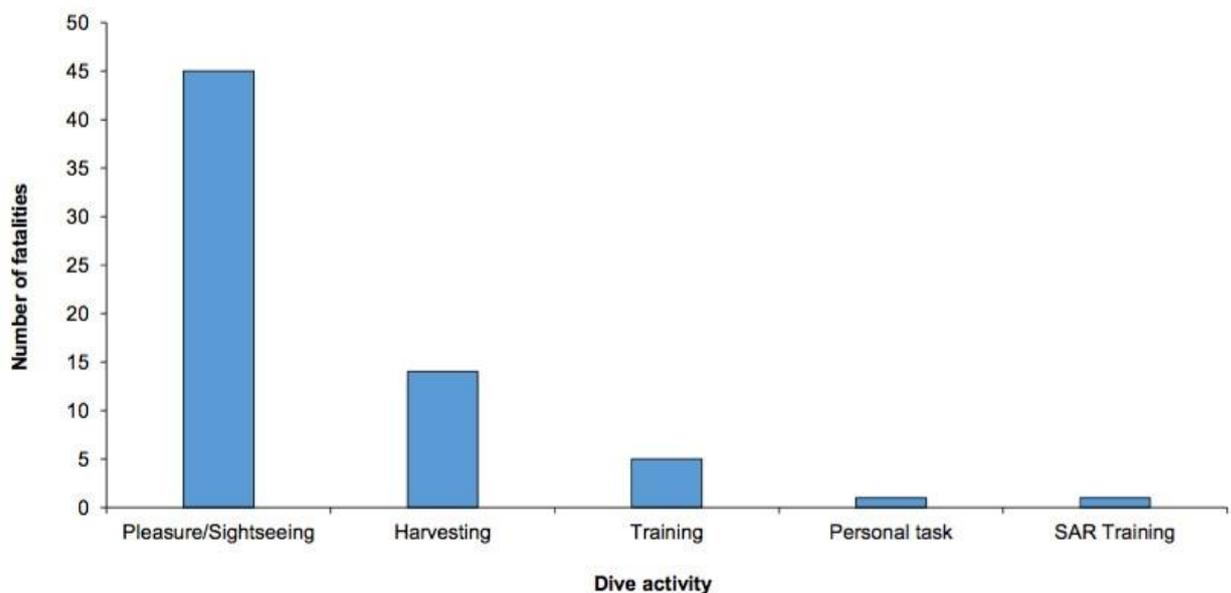
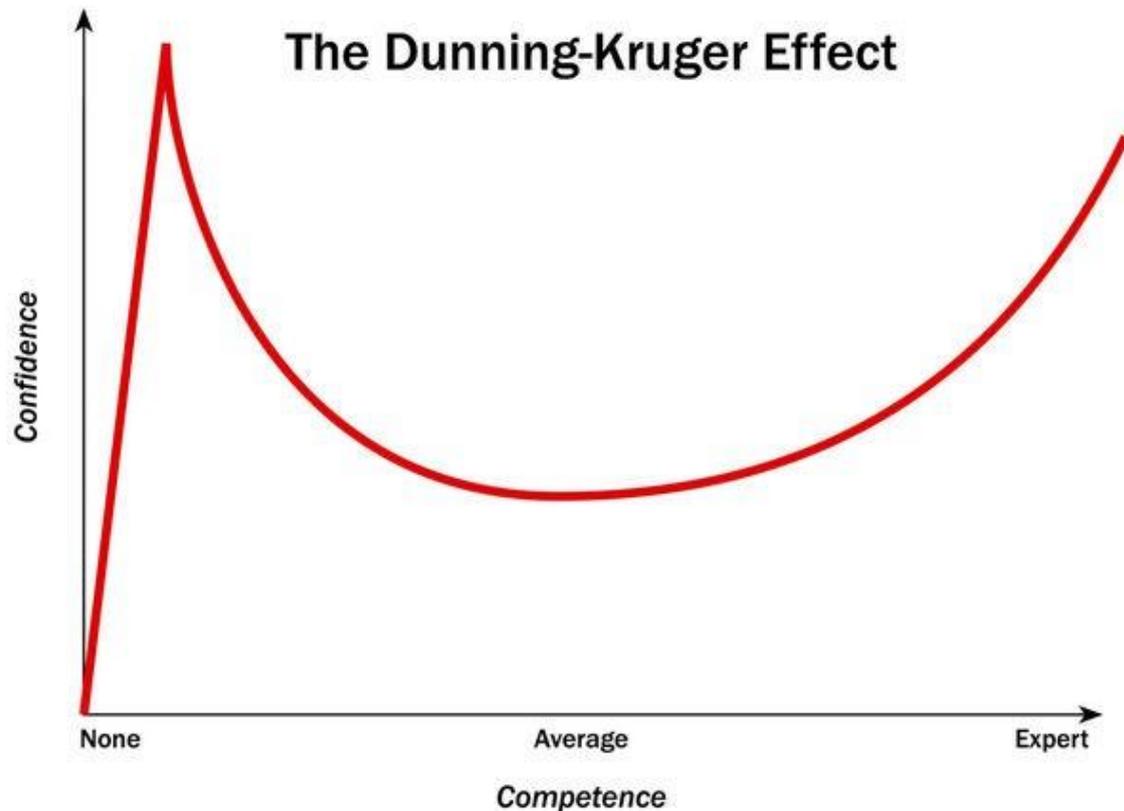


Figure 1.6-1 Diving activity (n=66)

However, according to a recent report by [Divers Alert Network](#), a disproportionately large number of serious injuries and fatalities befell recreational divers on pleasure and sightseeing dives. In fact, 66 percent of fatalities in the 2016 report fall into this category. A considerably smaller proportion of incidents occur in training situations, when experts work within set training parameters. Many accidents are due to diver error, as mentioned. And one of the key drivers may be the psychological phenomenon known as the [Dunning-Kruger Effect](#).



The Psychology: Unskilled and unaware

Two Cornell University professors, David Dunning and Justin Kruger, first explained their findings in 1999. Their research indicated a cognitive bias in novices within widespread fields, from tennis to medicine, to chess. The bias presents in novices as a belief that they are much more competent than they really are. As Dunning put it, “If you’re incompetent, you can’t *know* you’re incompetent. The skills you need to produce a right answer are exactly the skills you need to recognize what a right answer is.”

These blind spots in cognition leave novices in any given field, including [scuba diving](#), with difficulty recognizing their own shortcomings. This may lead to inflated self-assessments of skill and knowledge level.

Dunning-Kruger indicators in scuba diving

Scuba diving is a never-ending learning curve of evolving skills and new technology. Naturally, in those first few qualifying dives, there is much to learn. During the first 10 to 100 dives, novice divers often feel a rush of confidence disproportionate to their competence. The curve of confidence and *perceived* competence (picture above) often peaks in that range. Then, after gaining some knowledge, the diver forms a more realistic assessment of their *actual* abilities. The curve of the diver’s confidence drops away as they begin Rescue, Divemaster or technical-diver training.

Subsequently, confidence and competence grow together as a diver gains new skills and experiences over the longer term. Although note that even experts lack the supreme

confidence of those at the early peak. They understand that there is always more to learn.

Signs of a Dunning-Kruger diver

Divers in that initial 10 to 100 logged-dives range are often receptive to advice and open to learning new scuba skills, or receiving coaching. Those at the peak of the early confidence curve, however, often exhibit traits that can frustrate their buddies and dive center staff or, potentially, lead to hazardous behavior. Here are a few signs of a Dunning-Kruger diver: have you (or someone you know) ever exhibited any of these behaviors?

Ignoring equipment advice

Having the right equipment for your level of diving and environment is key. It would be unwise, for example, to take warm-water rated regulator into cold water. Local instructors, divemasters and dive center staff will often make recommendations based on your planned dives and experience level, whether that's having a reel and SMB, using nitrox, or the suitability of your BCD, regulator, exposure suit or hood.

The Dunning-Kruger diver will often spurn the advice of divers more experienced or qualified in that diving activity or environment. For example, they may insist on taking gloves, a pointer or a shaker — despite a ban in the marine park or advice not to use them from a local guide. Alternatively, the diver may insist that they don't need a hood or gloves in a tougher environment, finding themselves cold as the dive progresses to depth or exposing them to hazards on a wreck dive.

Solution: Listen to the advice of experienced local divers and staff. They know the waters, procedures and suitable equipment for the dives.

Ignoring training course advice

If you want to advance your diver training, who better to consult than your instructor? They know the training standards, curriculum, and requirements of the various training courses in detail. Especially if they've already completed some training with you, the instructor can give you honest and constructive feedback as to whether you're a suitable candidate.

The Dunning-Kruger diver will often be wholeheartedly convinced they're capable of being a divemaster, instructor or technical diver after their first training dives, despite knowing little of the training standards, curriculum, and responsibilities. Conversely, the diver may be offended if he receives delicate advice from an instructor that he should gain more experience before progressing. The Dunning-Kruger diver will often ignore this advice and push to sign up in the course with an alternate instructor.

Solution: While ambition and enthusiasm for further training are admirable qualities, take the advice you receive and learn to walk before you run if so advised. Taking your time can prevent needless risks to yourself and fellow divers in your group.

Spurning technique advice

Sometimes when supervising certified divers, instructors, divemasters and guides will offer advice and tips outside of the confines of a course. This can be on a liveboard or during a guided boat or shore dive. It may be that, having observed the diver in the water, the professional offers advice on technique such as getting in/out of their equipment, buoyancy control, positioning, weighting, finning technique or even tips for diving motor skills such as deploying an SMB from depth more effectively.

The Dunning-Kruger diver will often rebuff, discard or discount advice from the professional diver. They may even, in some cases, attempt to rationalize their behavior or argue that *they're* correct and the professional is wrong. For example, a diver with volatile buoyancy may be convinced the equipment is at fault rather than accept advice from a professional.

Solution: Instructors, divemasters and guides sometimes offer coaching to recreational divers to help make the diver's experience safer and more enjoyable on future dives. Don't be offended if offered advice. These people are trying to help you and your buddies have a better experience.

Ignoring the rules (part 1)

Training agencies set procedures and limits based on data from thousands of training dives, test dives and accident statistics gathered from across the planet. Depth limits, dive procedures and training recommendations filter down to form the ever-evolving training standards we all agree upon. For example, it requires additional training to safely dive beyond recreational limits, inside wrecks or in a drysuit.

The Dunning-Kruger diver will often flaunt training limits — even reveling in ignoring them as a badge of honor. They'll often regard their survival as misguided validation that they have the skills required to repeat the feat. They may also take unsuitably qualified buddies beyond their training limits, putting others at risk as well.

Solution: Agencies carefully research the standards for each training level. They back these up with valid statistical and educational information. If you seek more challenging dives, get the correct training first.

Ignoring the rules (Part 2)

Each diving environment is subtly different. The entries, exits, boat procedures, marine interaction and local etiquette can vary wildly from region to region. The procedures for diving a wreck are different to those for diving a reef. There are hundreds of variables. Local dive-industry professionals define their procedures within the [briefings](#) to minimize risks and ensure group safety in coordination with boat crews and local authorities.

The Dunning-Kruger diver dismisses the local procedures and instructions in the briefing. They may feel they already have the necessary knowledge or believe their method is superior. This can lead the diver to cause safety issues that he could otherwise easily avoid. Diving headaches such as the diver not entering/exiting the water

correctly, signaling as required, being swept away in a current or, alternatively, raising the alarm due to buddy separation, are usually due to the diver not paying attention to (or disregarding) procedures.

Solution: The procedures that are in place exist for valid reasons — to preserve the dive site and, importantly, diver safety. Listen to the dive briefing. If anything is unclear, ask for clarification.

The metacognition we call the Dunning-Kruger effect should cause us all to pause and consider our own actions. The effect may explain the occasionally frustrating overconfidence of some of your dive buddies. Realizing that we're all still learning may help us seek out the best advice and training. We can all improve as divers, becoming safer and more skillful in the water.

Weitere Links:

https://scubatechphilippines.com/scuba_blog/dunning-kruger-effect-scuba-diving-risk-management/

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Reality or Fata Morgana ?

https://alertdiver.eu/en_US/articles/the-mirage-of-mount-stupid-diving-and-the-dunning-kruger-effect/

Kurzfassung:

“Mount Stupid” ist eine Fata Morgana: Tauchen und der Dunning-Kruger Effekt

“Unskilled and unaware of it” – Anspielungen auf den Dunning-Kruger-Effekt sind Teil so manch eines Gesprächs unter Tauchern. Die Ergebnisse der ursprünglichen Forschung werden jedoch häufig missverstanden oder verzerrt wiedergegeben, und möglicherweise ist der Effekt selbst nur eine Illusion. Von Tim Blömeke.

Florida Man. Die Darwin Awards. Jemand versucht sich im Raketen-Selbstbau und brennt seine Garage nieder. Oder experimentiert mit der Herstellung von Schnaps, mit ähnlichem Ergebnis. Die Geschichten sind austauschbar, doch die Moral bleibt dieselbe: Gefährliches Halbwissen ist gefährlich. Ka-bumm.

Die Welt des Tauchens hat ihren eigenen Bestand an Geschichten dieser Art. Bei vielen geht es um schlimme Dinge, die passieren, wenn Menschen ohne entsprechendes Training in Höhlen tauchen gehen. Etliche dieser Geschichten sind fiktional oder zumindest stark übertrieben, aber an realen Vorfällen besteht kein Mangel. Unfallberichte aus der Pionierzeit des Höhlentauchens, oder Sachbücher wie *Shadow Divers* von Robert Kurson sind ebenso lehrreich wie gruselig.

Im Jahr 1999 veröffentlichten zwei Psychologen namens David Dunning und Justin [eine Studie](#)¹, welche derartige Anekdoten mit einem wissenschaftlichen Hintergrund ausstattete. Die Forscher führten eine Reihe von Experimenten durch, bei denen sie Teilnehmer unterschiedlicher Kompetenzniveaus dazu aufforderten, ihr Abschneiden in verschiedenen akademischen Prüfungen vorherzusagen. Dunning und Kruger kamen zu dem Ergebnis, dass inkompetente Teilnehmer dazu neigen, ihre Leistung zu überschätzen, während kompetentere Teilnehmer sie genauer vorhersagten oder sogar unterschätzten.

Für das Internet war diese Studie ein gefundenes Fressen. Es gibt eine Vielzahl von Memes zum Thema, häufig mit Namen für bestimmte Merkmale einer fantasievoll geformten Kurve, die den Verlauf des Selbstvertrauens – Aufstieg, Fall, und Wiederaufstieg – entlang des Lernprozesses darstellen soll. Der Gipfel der Dummheit (“Mount Stupid”), das Tal der Verzweiflung, der Hang der Erleuchtung, und das Plateau der Nachhaltigkeit.

“Mount Stupid” ist eine Fata Morgana: Tauchen und der Dunning-Kruger Effekt

Von [Tim Blömeke](#)

24 April 2023

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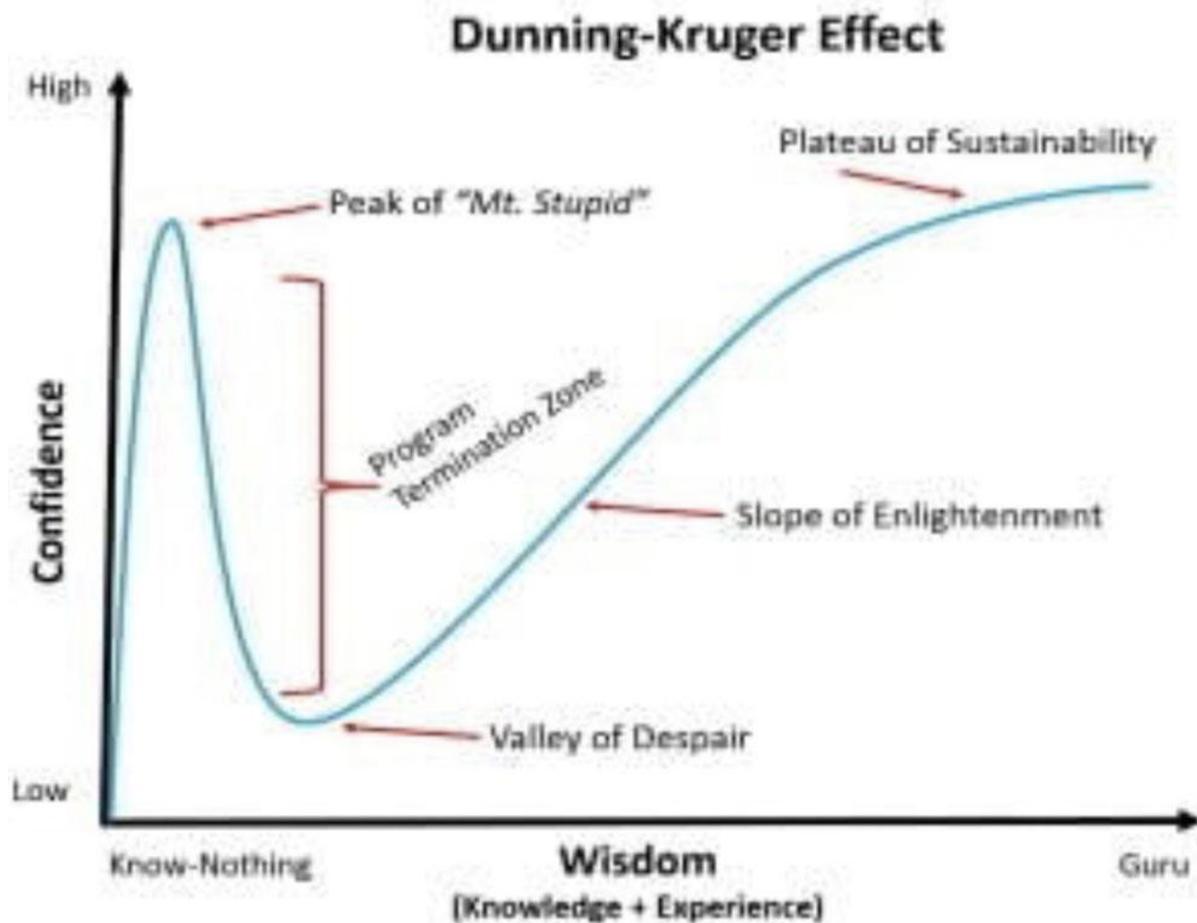


Abb. 1: Vielleicht haben Sie dieses oder ähnliche Bilder schon einmal gesehen. Sie haben mit den tatsächlichen Aussagen von Dunning und Kruger nicht viel zu tun.

Die Memes waren so erfolgreich, dass sie sogar in die Kurse von Unternehmensberatungen und Management-Seminare Einzug hielten. Es gibt daher so einige Leute mit ziemlich teuren Ausbildungen, die diese Memes für eine realistische Darstellung eines realen Phänomens halten. Viele von uns haben ähnliche Memes vielleicht an einer oder anderer Stelle im Zusammenhang mit dem Tauchsport gesehen.

Memes und andere Ideen verbreiten sich jedoch nicht, weil sie zutreffend sind, sondern weil sie ansprechend sind, und das Meme in der Abbildung oben weckt Erinnerungen an die spektakulären Anekdoten, die wir gerne hören. Wir alle kennen Geschichten von “diesem Typen” – und sehen wir den Tatsachen ins Auge, die Protagonisten in den Erzählungen über Dummheiten epischen Ausmaßes sind meist männlichen Geschlechts. Ein wenig angewandte Skepsis jedoch lässt uns schnell erkennen, warum wir uns bei der Bewertung empirisch nachprüfbarer Aussagen nicht unbedingt auf unsere persönliche Lebenserfahrung verlassen sollten.

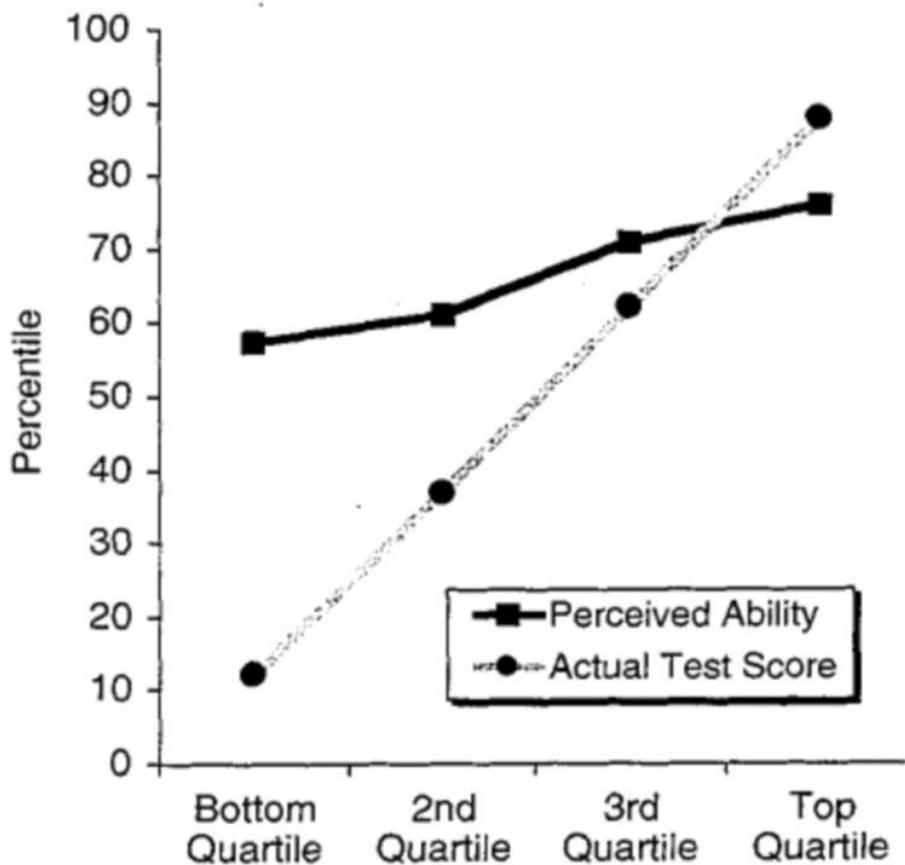


Abb. 2: Der eigentliche Befund von Dunning und Kruger. Vom Gipfel der Dummheit und dem Tal der Verzweiflung findet man keine Spur.

Ein großes Problem mit unserer Lebenserfahrung ist, dass unser Informationseingang nicht neutral ist. Selbstüberschätzung kann spektakuläre Ergebnisse produzieren, an die wir uns auch sehr viel später noch gut erinnern. Mangel an Selbstvertrauen hingegen erregt selten Aufmerksamkeit jeglicher Art. Alle haben von Bert gehört, der nach seinem Freiwasserschein mit einem umgebauten Feuerlöscher als Flasche in einer Höhle tauchen ging. Als seine Leiche gefunden wurde, machte dies international Schlagzeilen. Von seiner Mitschülerin Alina gibt es keine Geschichten – sie unterschätzte ihre Fähigkeiten so sehr, dass sie sich nach dem Kurs (bedauerlicherweise) nie wieder zu tauchen getraut hat. Die Berts dieser Welt werden Teil dessen, was wir unsere Erfahrung nennen. Die Alinas hingegen sind schnell vergessen.

Als jemand, der derartige Gedanken schon länger hegte, las ich mit großem Interesse, dass nicht nur die vulgäre Vorstellung des Dunning-Kruger-Effekts, sondern auch die Kernaussagen der Forscher in wissenschaftlichen Kreisen [unter heftigen Beschuss geraten](#) sind.² Im März schaffte es die Kritik an Dunning und Kruger in die Titelgeschichte der Fachzeitschrift [The Psychologist](#) (Journal der British Psychological Society), mit einer [Antwort](#) von David Dunning in der nachfolgenden Ausgabe. Die Kritik konzentriert sich im Kern auf die These, dass es sich bei dem von Dunning und Kruger gefundenen Effekt nicht um ein Merkmal der menschlichen Psyche handelt, sondern um ein statistisches Artefakt, versehentlich entstanden durch die Art und Weise, wie die Forscher ihren Versuch aufgebaut und ihre Daten ausgewertet haben.

Eine auch für Laien relativ zugängliche (und elegante) Version dieser Kritik hat der kanadische Ökonom Blair Fix in einem Blog-Artikel mit dem Titel "[The Dunning-Kruger Effect is Autocorrelation](#)" (April 2022) formuliert.

“Der Dunning-Kruger-Effekt taucht auch in Daten auf, in denen er nicht erscheinen sollte. Konstruiert man beispielsweise einen zufälligen Datensatz so, dass er keinen Dunning-Kruger-Effekt enthält, findet man den Effekt trotzdem. Der Grund dafür ist sehr einfach: Der Dunning-Kruger-Effekt hat mit der menschlichen Psyche nichts zu tun. Er ist ein statistisches Artefakt – ein verblüffendes Beispiel von Autokorrelation.

[...] Die mit ‘actual test score’ (tatsächliches Abschneiden in der Prüfung) beschriftete Linie im Graphen von Dunning und Kruger zeigt den durchschnittlichen Prozentsatz der einzelnen Quartile dar (klingt kompliziert, ich weiß). Das scheint zunächst in Ordnung zu sein, bis wir merken, dass Dunning und Kruger im Wesentlichen das Prüfungsergebnis mit sich selbst vergleichen.”

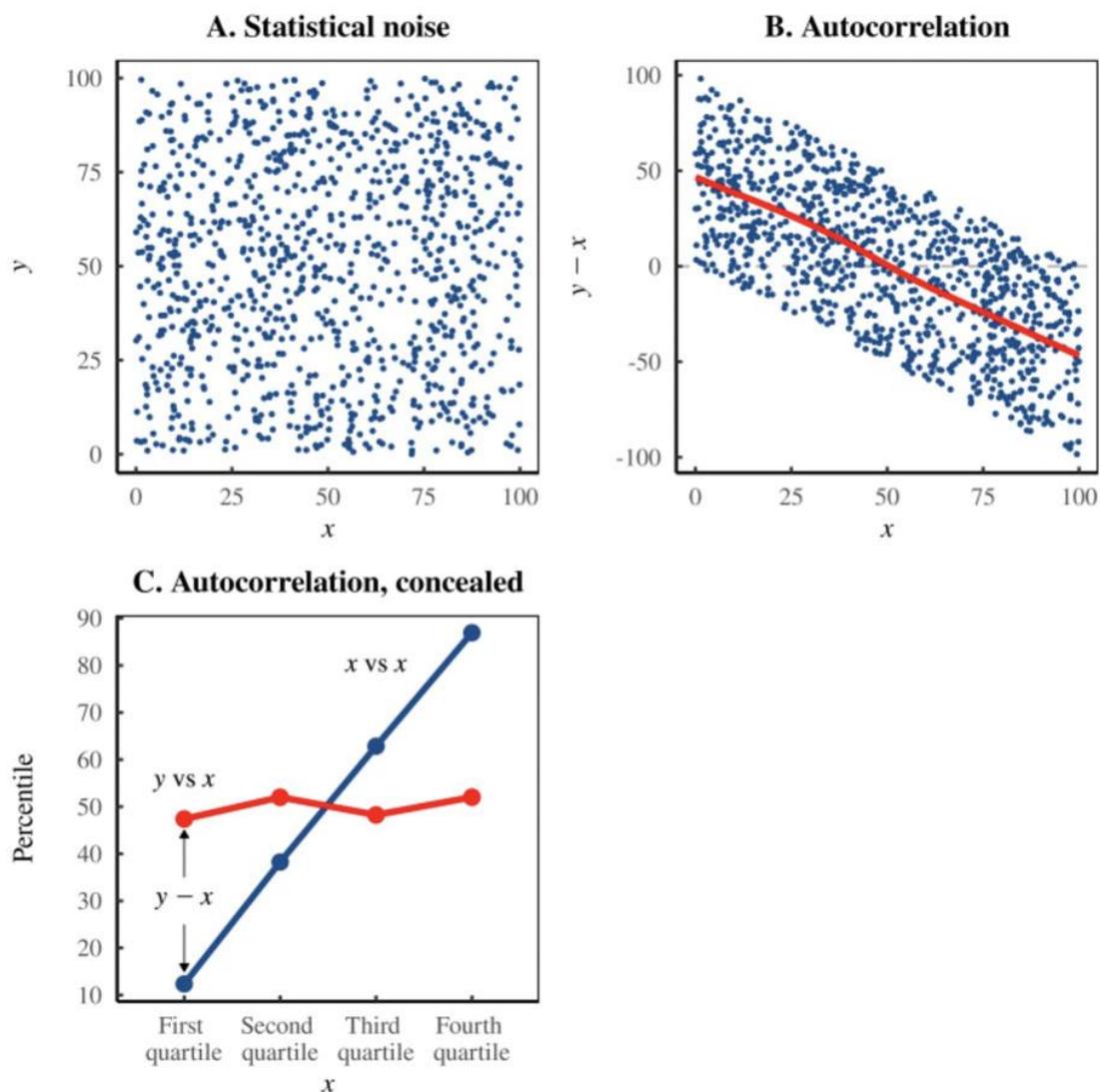


Abb. 3: Ein zufälliger Datensatz, und die gleichen Daten nach der Anwendung von Autokorrelation.

Quelle: "[The Dunning-Kruger Effect is Autocorrelation](#)"

Meine anfängliche Begeisterung bekam schnell einen Dämpfer als ich feststellte, dass ich zwar genug von Mathematik verstehe, um das Argument einleuchtend zu finden, aber nicht genug, um

es zu überprüfen. Der Umstand, dass die Kritik von Fix und anderen etwas bestätigte, das ich *ohnehin glaube wollte*, machte es nicht besser: Vielleicht war in eine ähnliche kognitive Falle getappt wie die Leute, die die überzeichnete, meme-ifizerte Fassung der Aussagen von Dunning und Kruger für bare Münze nehmen. Was, wenn ich durch die Festigung meiner Auffassung, der Dunning-Kruger-Effekt sei nicht real, mein unwissendes Selbst direkt auf den Gipfel der Dummheit katapultierte?

Ich brauchte die Hilfe eines Experten und wandte mich an Dr. Stephan Boes, seines Zeiches Beamter im statistischen Landesamt Nordrhein-Westfalen.³ Dr. Boes bestätigte die Kritik von Fix: “Die Autokorrelation ist mit Sicherheit da. Ohne die Originaldaten auszuwerten kann ich nicht genau sagen, wie ausgeprägt sie ist, aber es sieht für mich ziemlich deutlich aus. Es gibt aber noch ein weiteres, vorgelagertes Problem: Die Probanden wurden nicht gefragt, für wie kompetent sie sich hielten. Die gestellte Frage war, wie gut sie *im Vergleich zu den anderen Probanden* abschneiden würden. Ich sehe da zwei Probleme: Erstens müssten die Probanden zur Beantwortung dieser Frage wissen, wie kompetent die anderen Probanden sind. Zweitens bin ich der Meinung, dass eine Rangliste zur Darstellung der Verteilung von Leistungen bei der Erfüllung von Aufgaben in der realen Welt ungeeignet ist. Hier findet man typischerweise am einen Ende der Kurve ein paar Leute, die konsistent unterdurchschnittlich abschneiden, am anderen Ende ein paar Leute, die konsistent überdurchschnittlich abschneiden, und dazwischen eine Mehrheit, die mal besser und mal schlechter als ihre Mitbewerber sind. Die Art und Weise, wie Dunning und Kruger ihre Ergebnisse präsentieren, lässt dies komplett außer Acht.” Diese Einschätzung trifft sich mit einer anderen Kritik des Dunning-Kruger-Effekts: In einer [Studie aus dem Jahr 2020](#) stellen die Autoren Gilles E. Gignac und Marcin Zajenkowski fest, dass das Phänomen der *vermeintlichen Überlegenheit (illusory superiority)* eine bessere Erklärung für die Diskrepanz zwischen Selbsteinschätzung und tatsächlicher Leistung liefert, die Dunning und Kruger festgestellt haben. Vermeintliche Überlegenheit beschreibt die Beobachtung, dass die meisten Menschen sich für intelligenter, kompetenter, bessere Autofahrer usw. als der Durchschnittsmensch halten (ein Ding der Unmöglichkeit. da 50% liegen per Definition unter dem Median liegen).

Vor dem Hintergrund dieser Informationen erscheint es zweifelhaft, Dunning-Kruger im Zusammenhang mit dem Tauchen anzuwenden. Zunächst einmal führt die Beschreibung der Fähigkeit von Tauchern in Form einer Rangliste zu nichts. Es ist irrelevant, ob Sie bei ihrem Advanced Open Water-Schein unter den besten oder den schlechtesten 25% der Kursteilnehmer waren. Worauf es ankommt ist, dass ihre Fähigkeiten angemessen sind für die Tauchgänge, die Sie tatsächlich unternehmen – eine ja/nein-Frage, kein Wettbewerb. Und selbst wenn wir diesen Umstand ignorieren, gibt es noch andere Faktoren, die eine Rolle spielen. In einem PADI-Seminar zu Risikomanagement, an dem ich teilgenommen habe, betonte der Dozent, dass die Mehrheit der Unfälle während des Tauchunterrichts nicht unter frisch gebackenen Absolventen von Tauchlehrerausbildungen passieren, die meinen, sie wüssten alles. Unfälle sind häufiger unter erfahrenen Tauchlehrern, die nachlässig werden.

Nun, da wir mit diesem Wissen bewaffnet sind, was sollten wir tun, wenn Tauchlehrer oder -partner nebenbei im Unterricht oder bei einem Kaltgetränk eine Bemerkung mit Bezug zu Dunning-Kruger oder Mount Stupid fallen lassen? Wir könnten von unserem Stuhl aufspringen und in eine wilde Tirade ausbrechen darüber, dass der Dunning-Kruger-Effekt nicht das ist, was

die meisten Leute denken, und wie wir im *Alert Diver* gelesen haben, dass der Effekt vielleicht gar nicht existiert, und wenn doch, er dann wahrscheinlich nichts mit dem Tauchen zu tun hat.

Dies sollten Sie nur dann tun, wenn Sie die Absicht haben, den Rest des Abends mit einer Debatte über die Methodologie quantitativer psychologischer Studien, Regression zur Mitte und Artefakten zu verbringen, die entstehen wenn man x gegen $(x-y)$ aufträgt und dabei x und y aus dem gleichen begrenzten Wertebereich stammen. Sollte dies nicht der Fall sein, wäre es besser, Erwähnungen von Dunning-Kruger nicht wörtlich zu nehmen, sondern sie als eine Art kulturellen Code zu verstehen: Als Kurzform all der Geschichten, die uns davor warnen, die Schwierigkeit einer Aufgabe zu unterschätzen, die wir uns vorgenommen haben. **Der Dunning-Kruger-Effekt ist vielleicht eine Illusion, Selbstüberschätzung gibt es aber mit Sicherheit trotzdem. Und Selbstüberschätzung ist für gewöhnlich gefährlicher als ihr Gegenteil, beim Tauchen und anderswo, und das sollten wir nicht vergessen.**

Mögen die Flanken Ihrer Lernkurven stets glatt und voller Freude sein.

Fußnoten:

¹ Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134. [APA PsycNet](#)

² Nuhfer, Edward, Christopher Cogan, Steven Fleisher, Eric Gaze, and Karl Wirth. "Random Number Simulations Reveal How Random Noise Affects the Measurements and Graphical Portrayals of Self-Assessed Competency." *Numeracy* 9, Iss. 1 (2016): Article 4. DOI: [Random Number Simulations Reveal How Random Noise Affects the Measurements and Graphical Portrayals of Self-Assessed Competency](#)

Gilles E. Gignac, Marcin Zajenkowski, "The Dunning-Kruger effect is (mostly) a statistical artifact: Valid approaches to testing the hypothesis with individual differences data." *Intelligence*, Volume 80, 2020, 101449, ISSN 0160-2896, <https://doi.org/10.1016/j.intell.2020.101449>.

Robert D. McIntosh and Sergio Della Sala, "The persistent irony of the Dunning-Kruger Effect." *The Psychologist*, Journal of the British Psychological Society, vol. 35, March 2020, [The persistent irony of the Dunning-Kruger Effect | BPS](#)

David Dunning, "The Dunning-Kruger effect and its discontents." *The Psychologist*, Journal of the British Psychological Society, vol. 35, March 2020, <https://www.bps.org.uk/psychologist/dunning-kruger-effect-and-its-discontents>

³ Die hier ausgedrückten Meinungen sind persönlich und geben nicht die Auffassung des Arbeitgebers von Dr. Boes wieder.

Der Autor

[Tim Blömeke](#) unterrichtet Tech- und Sporttauchen in Taiwan und auf den Philippinen. Er ist Autor und freier Übersetzer, sowie Mitglied des Redaktionsteams von *Alert Diver*. Im Netz erreicht man ihn über seinen [Blog](#) und auf [Instagram](#).