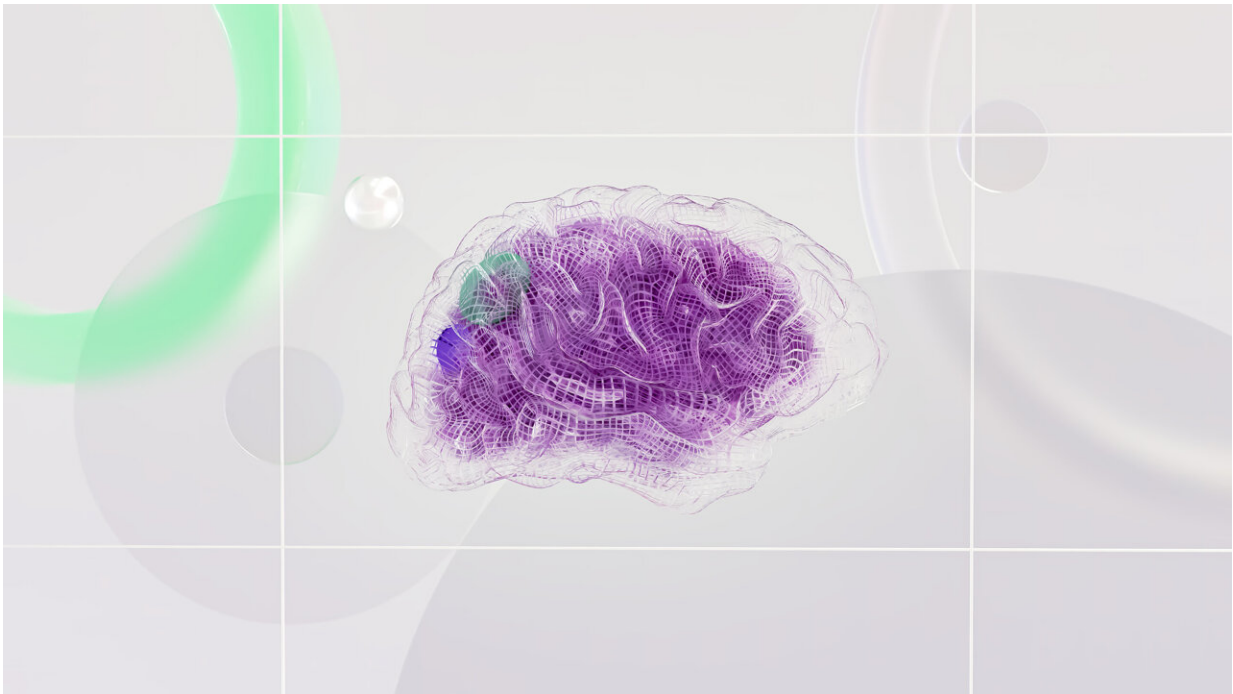


Who are smarter, rocket scientists or brain surgeons?

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Credit: Google DeepMind from Pexels

We use 'it's not rocket science' and 'it's not brain surgery' almost interchangeably to say that we don't think something is very difficult to do or to understand. Which phrase is more deserving? And more importantly, should rocket scientists or brain surgeons be crowned the winners of the wits?

A research team led by University College London neuroscientist Dr. Inga Usher set out to provide the answers. Findings published in the *BMJ* are actually very encouraging for the rest of us, but more on that a little later. "The main purpose of our study was to settle this debate once and for all and to provide rocket scientists and [brain](#) surgeons with evidence to support their self-assuredness in the company of the other party," the authors wrote.

Who has the intellectual edge?

The researchers carried out online intelligence tests involving 329 aerospace engineers and 72 neurosurgeons. They compared and analyzed the respondents' skills in problem-solving, including planning and reasoning, working memory, attention and emotion-processing abilities.

The team of researchers found that brain surgeons and rocket scientists were just about equally matched. However, they differed in two areas. Aerospace engineers showed better attention abilities and mental manipulation skills like rotating images of objects in one's head, while neurosurgeons were better at semantic problem-solving, such as defining rare words.

These two aren't as smart as we think they are. Results from 18 257 members of the general public revealed that there were few differences when comparing aerospace engineers and neurosurgeons with this group. "Compared to the general population, aerospace engineers did not show significant differences in any domains," the authors stated.

"Neurosurgeons were able to solve problems faster than the [general population](#) but showed a slower memory recall speed."

Do 'it's not rocket science' and 'it's not brain surgery' hold any truth?

Why do we usually bring up brain surgeons and rocket scientists when referring to levels of intelligence? According to the study, 'it's not rocket science' probably originated in the 1950s when German rocket scientists were brought to the United States to support the emerging space program and design of military rockets. The origin of 'it's not brain surgery' isn't as clear.

So, which phrase should we use from now on? The scientists suggested that we stop saying 'it's not rocket science' to mean something is not particularly difficult. "In situations that do not require rapid problem solving, it might be more correct to use the phrase "It's not brain surgery.'"

Could we have been giving brain surgeons and [rocket](#) scientists a bit too much credit all this time? "It is possible that both neurosurgeons and aerospace engineers are unnecessarily put on a pedestal and 'It's a walk in the park' or another phrase unrelated to a career might be more appropriate," the authors concluded, saying also that "other professions might deserve to be on that pedestal, and future work should aim to determine the most deserving group."

"Essentially what we think it shows is that everyone has a range of skills, some people are better at some things and other people are better at other things, and it is very difficult to be better in everything across the board," co-author Aswin Chari told *The Guardian*.

More information: Inga Usher et al, "It's not rocket science" and "It's not brain surgery"—"It's a walk in the park": prospective comparative study, *BMJ* (2021). [DOI: 10.1136/bmj-2021-067883](https://doi.org/10.1136/bmj-2021-067883)

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