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The features marked with a star (\*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.

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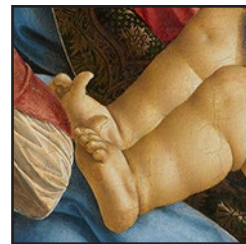
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IBC Unclassified Ads



### On the Front Cover

The upraised big toe—the Babinski sign—evident in a child, in a Renaissance painting. See page 11 and page 22.



### On the Back Cover

An unidentified man stands inside a spiracle on a lava field near Laxamyri Iceland, 1893.



## Some Coming Events

The Covid-19 pandemic has introduced excitingly boundless uncertainty as to whether, when, where, and how various public activities will happen in the near future. In 2021 some will happen teledistantly.

See [IMPROBABLE.COM](https://www.improbable.com) for details of these and other events:

### September 9, 2021

The 31<sup>st</sup> First Annual Ig Nobel Prize Ceremony and Webcast

### September 10–November 3, 2021

Ig Nobel Museum Exhibition, Fukuoka, Japan

### September–November 2021

Ig Informal Lectures [online]

### October 19, 2021

New York City, USA

### January 14, 2022

Arisia, Boston, USA

### January 20, 2022

Improbable Conversation series premiere (online)

### Spring 2022

2022 Ig Nobel Euro (and Britannia) Tour [if the pandemic allows]



**The Improbable Research podcast is back!**

<https://www.improbable.com/category/the-weekly-improbable-research-podcast/>

### Where There's More

There's always new improbable — it's not what you expect! — stuff on the **Improbable Research blog** at [IMPROBABLE.COM](https://www.improbable.com)

# IG® NOBEL LIMERICKS: LEVITATING FROGS, INCOMPETENCE UNAWARENESS

*Ig Nobel achievements distilled into limerick form*

*by Martin Eiger, Improbable Research Limerick Laureate*

The Ig Nobel Prizes honor achievements that first make people LAUGH, then make them THINK. For details of all the Ig Nobel Prize-winning achievements, see each year's special Ig Nobel issue of the magazine, and also our web site [www.improbable.com/ig/winners](http://www.improbable.com/ig/winners).

## 2000 Ig Nobel Physics Prize

The prize was awarded to Andre Geim and Michael Berry for using magnets to levitate a frog. [REFERENCE: "Of Flying Frogs and Levitrons" by M.V. Berry and A.K. Geim, *European Journal of Physics*, vol. 18, 1997, pp. 307-313.] NOTE: Ten years later, in 2010, Andre Geim won a Nobel Prize in Physics (for research on another subject).

A CLEVER RESEARCHER SURMISES  
WHEN MAGNETS ARE USED, A  
FROG RISES.

THE GROUNDWORK IS LAID,  
FURTHER STUDIES ARE MADE,  
AND THE SCIENTIST WINS LOTS  
OF PRIZES.

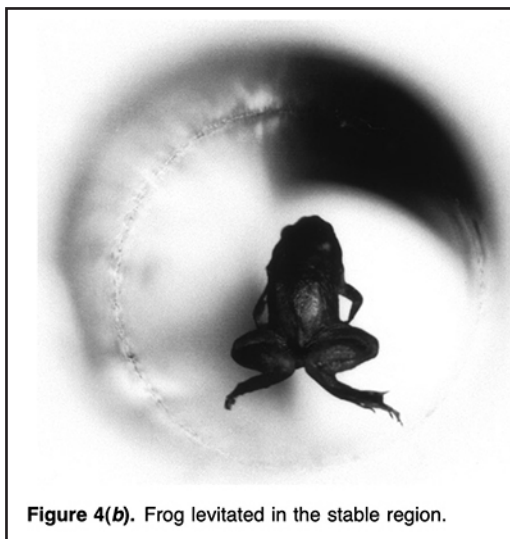


Figure 4(b). Frog levitated in the stable region.

Of course this represents the summation of currents localized in atoms, not the bulk charge, so the living creatures were not. Indeed, they emerged from their ordeal in without suffering any noticeable biological damage. (also Schenck (1992) and Kanal (1996).

As we showed earlier, it is impossible to levitate paramagnets stably. Balance of forces can only be achieved, and from (4) with the sign change, it is clear that this occurs for  $z < 0$ , and close to the center of the solenoid—rather than near the bottom.  $\chi_{\text{paramagnetic}} \approx 10^{-3} \approx 100\chi_{\text{diamagnetic}}$ ; thus, the frog is vertically stable but laterally unstable. In some paramagnetic objects (Al, several types of stainless steel, paramagnetic salts with diamagnetic impurities) were suspended in this way, but not levitated. On a few occasions, paramagnets floated without contact, but were found to be buoyed up by a current of paramagnetic air; when this was stopped, for example by covering the ends of the solenoid, the objects slipped sideways and were

*Detail from the study "Of Flying Frogs and Levitrons."*

## 2000 Ig Nobel Psychology Prize

The prize was awarded to David Dunning and Justin Kruger, for their modest report "Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments." That study was published in the *Journal of Personality and Social Psychology* (vol. 77, no. 6, December 1999, pp. 1121-1134).

WHEN TALENTS ARE JUST  
SECOND-RATE,  
SELF-ASSESSMENTS MIGHT TEND  
TO INFLATE.

BUT THAT DOESN'T APPLY  
TO ME, AND HERE'S WHY:  
IT DOESN'T BECAUSE I AM GREAT.

### Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments

Justin Kruger and David Dunning  
Cornell University

People tend to hold overly favorable views of their abilities in many social and intellectual domains. The authors suggest that this overestimation occurs, in part, because people who are unskilled in these domains suffer a dual burden: Not only do these people reach erroneous conclusions and make unfortunate choices, but their incompetence robs them of the metacognitive ability to realize it. Across 4 studies, the authors found that participants scoring in the bottom quartile on tests of humor, grammar, and logic grossly overestimated their test performance and ability. Although their test scores put them in the 12th percentile, they estimated themselves to be in the 62nd. Several analyses linked this miscalibration to deficits in metacognitive skill, or the capacity to distinguish accuracy from error. Paradoxically, improving the skills of participants, and thus increasing their metacognitive competence, helped them recognize the limitations of their abilities.