

Tekst 8

To the Editor:

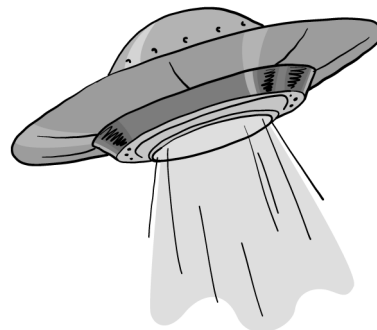
Re “The Truth May Yet Be Out There,” by Adam Frank (Opinion guest essay, June 2):

As a nonscientist, I hesitate to quibble with a professor of astrophysics about the criteria for acknowledgment of extraterrestrial life. However, Dr. Frank addresses the matter as if it can be adequately probed by the application of current scientific and technological tools.

Wouldn't it be safe to say that, whatever might be out there, a few quadrillion miles away from us, is likely to be utterly dissimilar to everything we know with our earthbound consciousness? If so, we literally couldn't even conceive of that world's nature or its inhabitants, if there be any.

If an 18th-century scientist were somehow to obtain a view of our 21st-century world, what capacity would he have to recognize nuclear power, an M.R.I. scan or Wi-Fi? Or, indeed, the principles behind spaceflight? He would be, as we all are, a prisoner of his paradigm.

Extraterrestrial “life” may be no more graspable by science than the charms of music.



Simon Marcus, Oakland, Calif.

Adam Frank ignores an important aspect of this issue: the possibility that any extraterrestrials from an advanced civilization visiting us may not be friendly, which should be of great concern to all of us.

Let us hope that whatever aliens we encounter do not turn out to be like us – blithely devastating and exterminating other creatures and the biological systems that sustain life on Earth. Even and especially if they are kind and compassionate, they might feel obliged to exterminate such a dangerous and destructive “pest” species as human beings. We clearly represent a threat to most other life-forms on our planet.

Our sense of morality and ethics rarely restrains us in our pursuit of domination of animals and nature. Why should aliens treat us any differently?

Lewis Regenstein, Atlanta

If extraterrestrials indeed exist, the answer to Adam Frank's question of why they don't simply announce themselves on the White House lawn may be that they are too far above us in every way to be bothered trying to establish contact with so inferior a life form. 33

Pamela Reis, Branford, Conn.

I, too, am a physicist who works on finding planets around other stars and life on them. While I largely agree with Adam Frank's essay, many scientific advances have come about through eyewitness accounts of phenomena. One of the more interesting of these stories, which I have written about, involves meteorites. Ernst Chladni published a book in 1794 asserting that rocks fall from the sky, based on many nearly identical stories spread over time and location. That there were rocks in space was considered absurd at the time, and his book was largely dismissed, precisely because he relied on eyewitness evidence. A few months after the book was published, a large fireball appeared over a city in Italy, and later a 56-pound rock fell in England. Chladni was right, and he helped form an entire subfield of science, based on eyewitness accounts. While U.F.O.s may indeed be explainable, eyewitness accounts by nonscientists ought not be automatically dismissed.

Rebecca Oppenheimer, curator in the astrophysics department at the American Museum of Natural History, New York

newyorktimes.com, 2021

Tekst 8 To the Editor:

- 1p 32 What is the main point made by Simon Marcus?
- A Our limitations prevent us from organising meaningful space expeditions.
 - B Stargazing will not help us fathom the mysteries that still abound around us.
 - C We are unable to comprehend what goes on beyond our frame of reference.
 - D We tend to misread the signs when spectacles follow unpredictable patterns.
- 1p 33 Which of the following fits the gap in the letter written by Pamela Reis?
- A Bees that have honey in their mouths have stings in their tails.
 - B Before you remove an ant hill from your lawn, do you first make your intentions known to the queen ant?
 - C Do hummingbirds hum because they do not know the words, or because they like their songs better that way?
 - D Even a fish would not get caught if it kept its mouth shut.

Op basis van de informatie uit de brieven die samen tekst 8 vormen, kun je achterhalen **wat Adam Frank heeft geschreven** in het essay 'The Truth May Yet Be Out There'.

- 2p 34 Geef van de volgende beweringen aan of ze aansluiten bij wat Adam Frank in zijn essay heeft geschreven.
- Noteer 'wel' of 'niet' achter elk nummer op het antwoordblad.*
- 1 Attempting to communicate with extra-terrestrials, if they do exist, could be extremely dangerous for us.
 - 2 The concept of extra-terrestrial life has had a major cultural impact and has been a topic of several movies, games and comic books.
 - 3 The search for aliens is risky and needs strict regulation at national and international levels.
 - 4 There are excellent reasons to search for extra-terrestrial life, but U.F.O. sightings will not provide evidence for its existence.

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift.