

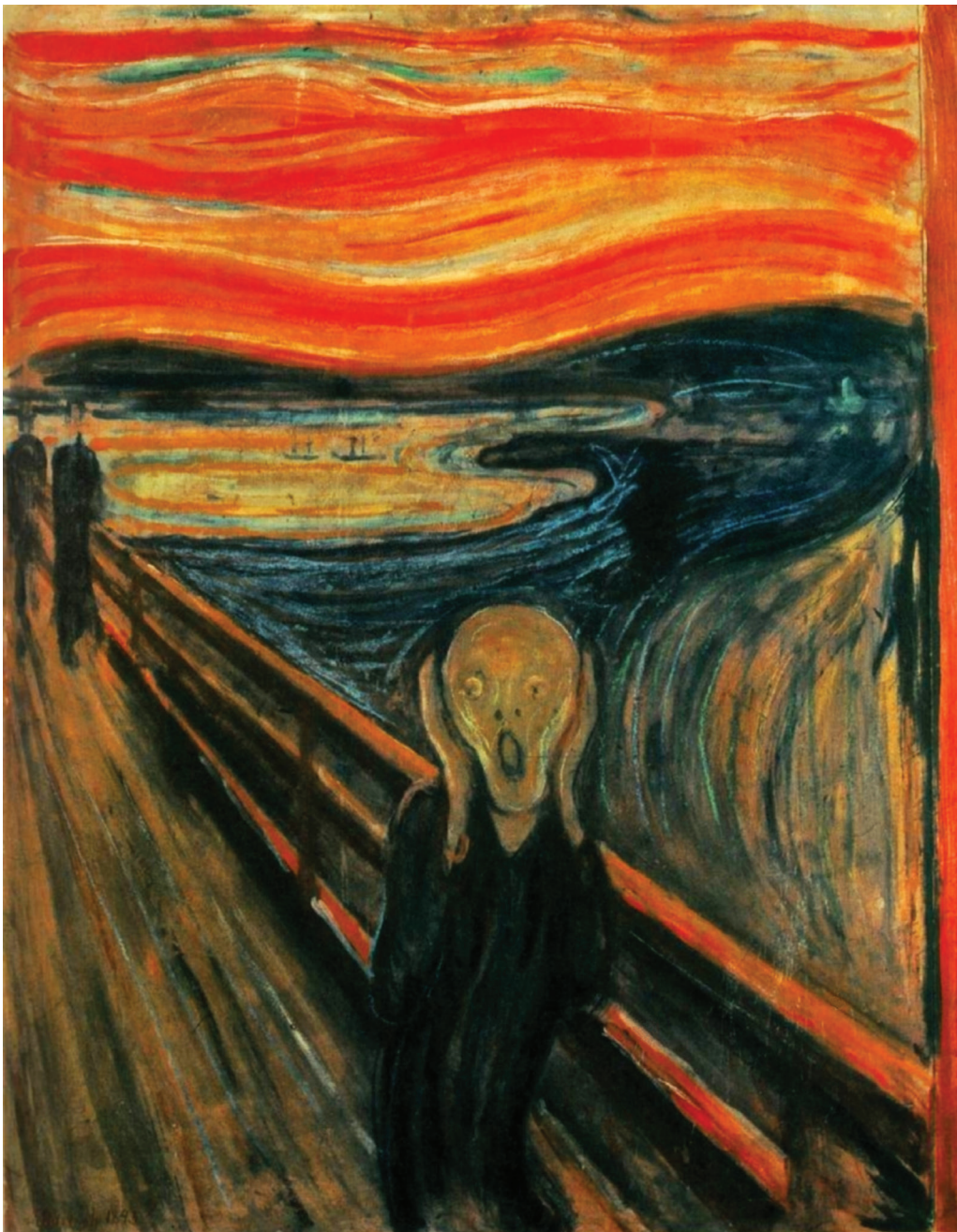


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*why
are
you
screaming?
fear
or
joy
or
something
else?
p2*

what's in the MWJ this month...



p2 - why are you screaming? Fear or joy? Or something else?

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Happy reading!

Kate Nacard, Editor

why are you screaming?

Human screams signal more than fear and are more acoustically diverse than previously thought, according to a study published on April 13th 2021 in the open-access journal PLOS Biology by Sascha Frühholz of the University of Zurich, and colleagues. Remarkably, non-alarming screams are perceived and processed by the brain more efficiently than alarming screams.

In nonhuman primates and other mammalian species, scream-like calls are frequently used as an alarm signal exclusively in negative contexts, such as social conflicts or the presence of predators or other environmental threats. Humans are also assumed to use screams to signal danger and to scare predators. But humans scream not only when they are fearful and aggressive, but also when they experience other emotions such as despair and elation. Past studies on this topic largely focused on alarming fear screams, so the broader significance of various scream types has not been clear. In this new study, the researchers addressed this knowledge gap using four different psychoacoustic, perceptual decision-making, and neuroimaging experiments in humans.

Twelve participants were asked to vocalize positive and negative screams that might be elicited by various situations. A different group of individuals rated the emotional nature of the screams, classified the screams into different categories, and underwent functional magnetic resonance imaging (fMRI) while listening to the screams.

The results revealed six psycho-

acoustically distinct types of scream calls, which indicated pain, anger, fear, pleasure, sadness, and joy. Perhaps surprisingly, listeners responded more quickly and accurately, and with higher neural sensitivity, to non-alarm and positive scream calls than to alarming screams. Specifically, less alarming screams elicited more activity across many auditory and frontal brain regions. According to the authors, these findings show that scream calls are more diverse in their signalling and communicative nature in humans than frequently assumed.

Dr. Frühholz notes: "The results of our study are surprising in a sense that researchers usually assume the primate and human cognitive system to be specifically tuned to detect signals of danger and threat in the environment as a mechanism of survival. This has long been supposed to be the primary purpose of communicative signalling in screams, (*but*) scream communication seems to have largely diversified in humans, and this represents a major evolutionary step. Humans share with other species the potential to signal danger when screaming, but it seems that only humans scream to signal also positive emotions like extreme joy and pleasure. Signalling and perceiving these positive emotions in screams seemed to have gained priority in humans over alarm signalling. This change in priority might be likely due to the requirements of evolved and complex social contexts in humans."

Medicalxpress.com

FROM THE EXCOMM

Isabella Holz

Dear Members,

First of all, I want to thank you for participating in the International Election and congratulate José L. Martínez, our new Director of Development and Tan Kee Aun, our new Director Smaller National Mensas! 8,359 people from 50 countries cast their vote. I am also extremely grateful for the chance to serve as your Director of Administration for a second term together with Björn Liljeqvist as Chair and Jacek Cywinski as Treasurer.

While some of you are busy with preparing for the World Gathering in Houston to celebrate our 75th anniversary or EMAG in Brno, Czech Republic, our global community still faces complexities and uncertainties due to COVID-19. In our May newsletter, we asked people to give an estimate how long it would take till they can join international gatherings again. 41% guessed it would take 12 months, 32% expected 2-4 months. We also got feedback that an option for “more than 12 months” was missing. I really hope many members can enjoy international, national or local gatherings this year. And a huge thank you to everybody

involved in organizing gatherings!

With the huge differences between different countries on the one side and the dynamic of mutations on the other, planning on a global scale seems even more complex in 2021 than in 2020.

When you read this text, we will be in the middle of deciding about the November IBD meeting - either meeting in a European city or having a virtual meeting. While we are exploring different options for a specific location it feels quite weird to think about organizing even a simple dinner for 50 people in a restaurant.

In a similar way, more agile planning is required for anniversary activities. In May, the safest bet on what to expect has been IQ tests - 43% of our survey participants have plans to offer them. For other external or internal events or marketing/PR campaigns, the majority considers these options



as a possibility but has no final plans for them. Hopefully, we will have more stable conditions in July and August, allowing local teams to organize events for their members and/or the public.

You might remember the global Intelligence Day for our 65th anniversary in 2011 when 28 Mensa groups and 151 cities participated with various activities. In addition to IQ tests, the teams offered e.g. lectures on giftedness and a multiplicity of other topics, classic Mensa events like game nights,

(continued on p04)

and round tables or dinner events open for non-members, thus allowing people to get an impression of Mensa. At that time the joint mission was attracting new members. Some countries also offered discounts on IQ tests to increase the number of participants. Now - writing this text at the end of May, a few weeks before our joint anniversary workshop - it is hard to tell what this anniversary will look like from a global perspective. Some countries have already made detailed plans for both internal and external activities. Some might be more than happy to start with the first events for their members and will invest their resources accordingly. Some might be (still or back) in some kind of lockdown. Some might even experience a deficit in local resources - either volunteers or money.

In the midst of this uncertainty I am really looking forward to the next months to find out how Mensa International can support the national groups and give them a platform to support and learn from each other - for the anniversary celebrations and beyond. Since I applied for ExComm one of my goals has been to improve the global network, strengthening not only the international volunteers but also the connections to and between national/local volunteers. During the last year several teams like the IVN committee or the ICOs have reached out to national teams. Surveys e.g. on Gifted Youth activities or national archive strategies tried to capture the global picture and allowed to

share these insights with all the volunteers involved.

I am also very happy to announce an important piece of good news for all members: We just received confirmation that we can keep Workplace! To cut a long story short, we have been upgraded to Workplace For Good, which is offered to eligible non-profits. Thus we can continue to invite all members to use Workplace and expand it to offer new services and options for you to connect and engage with Mensans worldwide. Looking forward to seeing you there!

Isabella Holz
Director of Administration
admin-mil@mensa.org

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POETRY COMPETITION 2021

The Mensa International Poetry Competition 2021 closed on August 1. Thank you to all who entered; our initial judging panel are now reading all the entries to select a short list to be forwarded to the international judging panel. The final results will be published in the *Mensa World Journal* and on the mensa.org website later in the year.

The winning poems will be published in the *MWJ* and on the website, and I'll include as many entries as possible in future issues of the *MWJ*.

One of last year's shortlisted entries is published at right (thank you Frank!) - as I write this, the winter sunshine is indeed here in Australia: blue skies, no wind and a comfortable 19 degrees celsius!

Best poetic wishes to you all,
Kate

Winter SUNSHINE

*It is a rare day
When the dingy grayness
Is pierced through and through
With bright, shining
Winter sunshine,
The gold sparkling off the
White fields and snow
Covered blacktops,
The light sparkles a diamond
Shimmer on the white snow,
And snow-capped branches
Of bare and dormant trees,
The light is so beautiful,
But cold, so cold,
Reflecting a white barrenness
Of the ground, the earth,
Nothing growing, everything
Either dead or sleeping
Beneath the ground,
One will have to wait
For spring, the warm
Golden spring to awaken
The world with luscious
Living green and
Bright, endless blue skies,
Endless in their blue vistas,
Wait for the wondrous golden
spring,
When warm winds will blow
And the birds nest and sing.*

Frank Tropea
American Mensa

Mensan Heroes

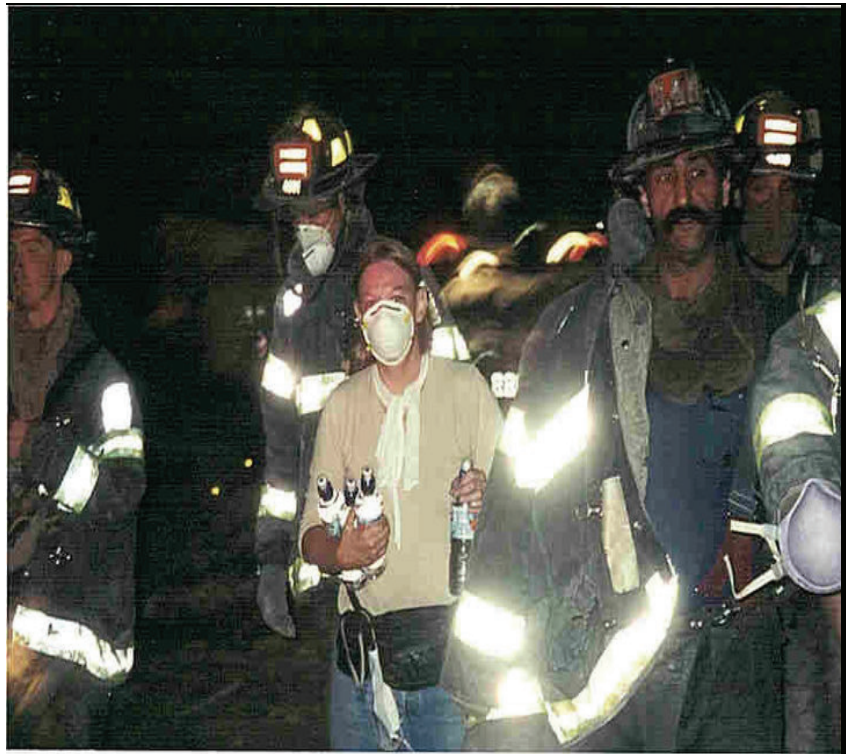
This month the MWJ starts a new feature - Mensa Heroes. Please send your stories of our courageous members to me at mwjeditor@mensa.org. Below, Diana McClure, a true hero of the World Trade Center terrorist attack, tells us of that fateful morning

American Mensan Diana McClure, a member in the Greater Phoenix Mensa chapter in Phoenix, Arizona, was on holiday in New York City on September 11, 2001. She became a rescue worker at Ground Zero the day the planes hit the World Trade Center buildings.

Born in southern California 60 years ago, her sharp mind was recognized in high school when she was placed in science, and math classes a grade above others her age. She married at 22 and moved to a small town in Arizona. The school district she worked for asked her to train as an Emergency Medical Technician (EMT) and this proved to be helpful years later.

At 30, divorced, and living back in Phoenix, AZ, she took college classes in TV and film production. This led to her being the executive producer of a low budget feature film called "Justice Be Damned." Her other occupations have included working as a teacher of special needs children, editing footage of the Exxon Valdez oil spill, opening and managing a retail magic shop that grew into the largest chain of magic shops in Arizona, and working for Homeland Security. Diana enjoys spending time with her pets, gardening, travelling, photography, and meeting new people.

On September 6th, 2001, Diana took a vacation to Manhattan, NY. She was staying on the upper east side of



Manhattan when the planes hit the World Trade Center on 9/11/2001. Waking up that morning to the constant ringing of a telephone, she checked her voice messages and learned of the terrorist attacks. She hurried downtown, on foot, making her way against the waves of people fleeing lower Manhattan. Eventually, she reached a corner, just three blocks away from WTC 7, where she joined ambulance crews.

At 5:20 pm that evening, she ran for her life as World Trade Center Tower 7 collapsed, the rubble rumbling straight toward her. In the days that followed, she volunteered her time in many capacities on the 'pile' at Ground Zero, the demolished site

where the World Trade Center Towers once stood. Working alongside hundreds of other people from all walks of life, she handed out water and food to other first responders, organized and manned a Red Cross station, and helped remove debris piece-by-piece from Ground Zero. The face masks available were of little help in protecting the workers from inhaling toxic substances.

When she returned home to Phoenix, AZ, she was quite ill with respiratory issues and general malaise, and the doctors didn't know how to help her. Now 20 years later, she still suffers from many ailments due to the toxic substances she was exposed to.

Photo: Diana, centre, at Ground Zero

The Alphabet Code

Mensan author Dr John Day has recently written a book, The Alphabet Code, in which he refutes the current theory of the origins of the Greek Alphabet. He outlines his theories below...

At present, almost every scholar follows the unreliable Herodotus about the Greek alphabet being created by non-Indo-European Phoenicians (despite an earlier tradition attributing the invention of writing to the legendary hero Palamedes). However, my book, *The Alphabet Code*, argues that Indo-Europeans created the alphabet.

One problem with the orthodox story, as a philologist pointed out in the 19th century, is that the Greek letters and their alleged Semitic forerunners suffer from a ‘nearly absolute dissemblance of form’: for example, zēta and Semitic zayin; mu and Semitic mem; san and Semitic tsade; rhō and Semitic resh.

Furthermore, as Barry Powell admits, ‘The signs of the West Semitic signaries bear little resemblance to the objects they are said to name.’ A, for example, supposedly depicts the head of an ox, although only after being rotated by 180°; B, a house; Θ, a hand; Π, a mouth. Yet no one doubts the Phoenician hypothesis.

The orthodox opinion holds that the Greek letters depict a jumble of unrelated ideas. In contrast, *The Alphabet Code* reveals that the alphabet has a structure. Specifically, the sequence of letters begins with birth and ends with death, A depicting a woman giving birth and Ω depicting

a tombstone.

So Greek alpha has nothing to do with Semitic oxen; rather, it derives from Indo-European *al- [*h2el-], to give birth. Other derivatives of *al - proving this meaning include Latin alvus, a belly; and Middle Breton all, Latin alius, Greek allos and Tocharian B allek, all meaning other; Welsh alu and Old Norse ala, to give birth, and Hittite haliya-, to kneel — because expectant women in Roman, Germanic and Greek myths give birth when kneeling; Greek alalazō, to cry aloud; Armenian alaḷel, to shout; Hittite halzai-, to cry out; and Greek algos, pain; Latin alga, a thing of little worth, and Sanskrit alpa-, small; Armenian alṭ, the skin enclosing the foetus or afterbirth; Latin algeō, to feel chilly — because one in three postpartum women feels chilled; Old Irish alt, to feed; Latin alō, to suckle; Old English alan, to raise; and Greek aldainō, to make grow.

As for Greek omega, it derives from Indo-European *ō- [*h3eh1-], to die. Other derivatives of *ō- proving this meaning include Latin otium, inactivity; Greek olingē, a short nap; Greek okhros, pale; Greek omos, gruesome; and Greek olese, destroyed; Lithuanian uolē, a hollow or a cave, and Old Russian jama, a grave; and Old English ora, a shore, and Lithuanian uola, a cliff — be-

cause such heroes as Achilles and Beowulf were buried in tombs near the shore; Greek okhra, yellow ochre, and Latin ovum, Latvian uola and Greek oon, all meaning an egg — because ancient tombs in Europe often contained ochre and real or artificial eggs; Greek olenē, a reed mat — because ancient tombs in Xinjiang were often covered by reed mats; Latin omen, an omen, and Old Saxon obian, to celebrate solemnly; Old Norse othal, a hereditary property or an inheritance; Latvian uozol, an oak tree, and Lithuanian uosis and Russian jasen, an ash tree — because in Baltic mythology the souls of men are ‘reincarnated ... in oaks, birches and ash trees’; and the Old Norse god Othinn, described by the Prose Edda as ‘Father of the Slain’.

(It’s not a unique occurrence for the final Greek letter to represent death. The runic alphabet ends the same way. Treating the last of twenty-nine runes, the Old English Rune Poem says: ‘Earth is loathsome to every man, when irresistibly the flesh, the dead body begins to grow cold ...’)

Incidentally, every guide to the Indo-European vocabulary covers two other letters depicting everyday objects: *bhī-, a bee — which gave rise to Greek phī or Φ; and *gwhī-, a thread — which gave rise to Greek khī or X.

(continued on p11)

MEMBER PROFILE

by Susan Jensen

José Beltrán, until recently the editor of Spanish Mensa's national magazine *OMNIA*, is a polyglot who speaks Spanish, Catalan, English, French, Russian, Japanese, Dutch, German, Italian, Portuguese and Romanian, among others. He switches from French to German to English to Dutch all day in his work as a Patent Examiner for the European Patent Office in The Hague, Netherlands. He learned basic Romanian in six days on a bet.



José was born and raised in Albacete, Spain. When he joined Mensa 32 years ago, at age 20, he felt a sense of belonging that helped him embrace his unique abilities.

Like many Mensans, he's pursued varied fields. He studied computer science at universities in Spain, and after receiving the equivalent of a Master's degree in Barcelona, the Japanese Government offered him a scholarship to do a PhD in robotic engineering in Tokyo.

He spent close to four years in Japan; the experience of living in such a different culture and so far away from home was enriching and

fulfilling.

When he was about to complete his PhD, José heard that the European Patent Office was recruiting; he applied, was accepted, and in January 1999, straight after obtaining his degree, he moved to the Netherlands to work as a Patent Examiner. He has been working there ever since.

The Patent Office recruits engineers like José because they need people who know technology in order for them to be able to decide whether a given product or process is really new and inventive and thus worthy of a patent. This also entails a lot of legal work, but

it seems that the Patent Office finds it easier to train engineers in legal issues than training lawyers in technology.

In his free time José enjoys music and writing. He is also a big gamer (very fond of RPGs and board games), and very much into reading. He also enjoys travelling and has seen the striking differences among the countries where he has lived. He has always found it relatively easy to adapt to new cultures; one great aspect of being a Mensa member is that Mensans tend to have much in common across various cultures.

José invites any Mensans visiting the Netherlands to get in touch. There is nothing he enjoys more than sharing a nice beverage and chatting with people from different cultures and world views. In his opinion, if more people were to do that (talk to others no matter how different they may be in their outlook, their beliefs or their opinions), things would be better for all of us in general as humans.

He can be reached at: josebelt@gmail.com

SJ

He's seen empires rise and fall. He's travelled halfway across the world. What can he teach us about longevity?

by *Inham Hassen*

Perhaps no other scientific theorem can be more depressing than the Gompertz-Makeham Law. This law of mortality states that the chance of someone dying (mortality risk) increases exponentially, as the living being gets older. For a human, the risk of dying doubles every 8 years from the age of 30 onwards. For a dog, it is every three years and for a rat, every three months.

The law itself has two components. Gompertz (1779 –1865) argued that aging accumulates and accelerates the damage to the body, which ultimately causes death. Makeham (1826-1891) subsequently added an age-independent component to the formula (such as external risks), making the law a reliable predictor of aging dynamics.

Though this formula only expresses the inevitable, it also gives a good foundation for scientists who research mortality to base their studies on. For example, the Makeham component can be under human control and in fact, studies have shown that the Makeham component (age-independent mortality) has gradually declined over the last century, which has contributed to the increase in life expectancy. The challenge is to determine how to defy the Gormetz component. And they found the answer in the lab itself!

Back in the early 80s, Rochelle

Buffenstein from Cape Town, South Africa, was studying the vitamin D metabolism of naked mole rats as part of her doctoral thesis. Naked mole rats, who spend all of their time in darkness, had a pale, wrinkly skin and loathe the sun, which probably gave rise to the research question on vitamin D. By the late 90s, Buffenstein noticed something odd: Her mole rats just didn't die. Generally, rats had a lifespan of 6 years, but most of Buffenstein's party had surpassed 15 and were still looking healthy. To put things into perspective, this is equivalent to a human, living up to 250 years while retaining quality of life.

Subsequently, Dr. Buffenstein who, thanks to this observation, pivoted to aging research, moved to the USA and one of her old lab-mates (affectionately named "Joe") eventually took a Lufthansa flight to Cincinnati Zoo, where he lived for some time, raising a family. The two were reunited in New York later. In 2021, Joe is 39, healthy and enjoys root vegetables. He has lived nine-times as long as any other species of rodents, which is the human equivalent of the rise and fall of about three empires.

Joe has provided Dr. Buffenstein with answers to many questions that scientists desperately look for. He (and indeed, other naked mole



rats) appear to defy Gompertzian law. When a living being ages, cell functions deteriorate, blood pressure goes up, and DNA gets damaged. Communication between cells break down. Muscles get weak and cancers bloom. The body has a natural repair function but as we age, rate of damage exceeds the rate of repair, and this difference grows exponentially.

In a paper published in 2018, Dr. Buffenstein argues that regardless of sex or breeding-status and unlike any other mammal studied to date, naked mole rats defy Gompertzian law even at ages 25 times past their time to reproductive maturity. She goes on to claim that naked mole rats are a "non-aging mammal" and an "exceptional model for biogerontology".

Over the years, scientists have learned more about age-defiance from naked mole rats than any other species. They have detected proteins that suppress tumours,

(continued on p11)

New complexity of travelling brain waves in memory circuits

Researchers at UC San Francisco have observed a new feature of neural activity in the hippocampus - the brain's memory hub - that may explain how this vital brain region combines a diverse range of inputs into multi-layered memories that can later be recalled.

Using a special "micro-grid" recording device developed by colleagues at Lawrence Livermore National Laboratory (LLNL), the UCSF researchers were able to measure hippocampus activity in study participants undergoing surgery to treat severe epilepsy. They discovered that brain waves travel back and forth across this structure, integrating messages from different areas of the brain, and showed for the first time what scientists previously had only been able to hypothesize.

"Brain recordings are an important part of guiding epilepsy surgery," said Edward Chang, MD, PhD, chair of the Department of Neurological Surgery and the senior author on the study, which appeared on May 12 in *Nature Communications*. "The new high-density electrode grid technology used here allowed us to see a novel property of hippocampal activity that was previously unknown."

Chang specializes in treating epilepsy with brain surgery, during which the hippocampus, a long structure deep inside the brain within an area called the temporal lobe, is exposed and sometimes fully or partially removed. The hippocampus can be a source of seizures for people with epilepsy and is one of the first brain regions affected in Alzheimer's disease.

Previous studies had suggested that waves of activity in the hippocampus only travel in one direction: from the back end, which encodes most of the information about physical location, to the front, which encodes most emotional information. To Jon Kleen, MD, PhD, lead author on the study and assistant professor of neurology at the Weill Institute for Neurosciences, this one-way travel wasn't sufficient to explain how this small brain region manages to link multiple types of information to form a memory.

As an example, he said, imagine that you've lost your keys in Times Square. "You remember the spatial "where" aspect - Times Square - but you also remember the emotional feeling 'Ack, I lost my keys!'" he said. To process a memory, Kleen noted, there must be some way to integrate many parts of a memory together. To accomplish this, he surmised, it would make sense for brain waves to travel via multiple routes to process information.

In an effort to test this hypothesis, Chang and Kleen partnered with Razi Haque, Implantable Microsystems Group Lead at LLNL, to develop a device that could give a high-resolution, two-dimensional picture of neural activity. Haque helped create a device smaller than a dime, containing 32 electrodes spaced 2 mm apart in a flexible polymer that could conform to the shape of the hippocampus.

During surgery, Chang gently laid the electrode array directly on the hippocampi of six different surgical patients to monitor electrical activity while the patients rested.

Using algorithms such as machine learning to analyze the data, the team found that not only do brain waves travel both up and down the hippocampus, but that the directions they move can be predicted.

The team also found that at times, waves of two different frequencies would be present at once, moving in different directions and potentially carrying different information. The finding lends new insight into how the hippocampus can integrate information coming from multiple brain areas into detailed memories.

Two of the patients were awake and interacting during surgery. Kleen was able to show them photos of common objects, such as a dog, and ask them to recall the word for it. Electrode data showed that while one patient was recalling the word, cycles of activity consistently travelled from the back of the hippocampus toward the front. Seconds later, the cycles of activity changed, travelling in the opposite direction. "The direction of wave travel may be a biomarker reflecting the cognitive process the patient is engaged in at that moment," Kleen said.

These initial observations are just the tip of the iceberg, he said. The next steps are to make observations with an even higher resolution set of electrodes and to observe neuronal activity in patients performing more complex cognitive tasks.

Extracted from <https://www.sciencedaily.com/releases/2021/05/21>

supplementally...

by John Blinke

Clearing the Air

Science News, May 18, 2021. “Cleaning Indoor Air May Prevent Covid-19’s Spread. But It’s Harder Than It Looks.”

You can reduce the risk of catching all airborne diseases if you breathe clean air. You can open windows if the weather is perfect. But properly designed air filters do a great job in any kind of weather. Filters remove the particles and droplets that viruses ride on. And, because Covid-19 is primarily spread through the air, this can go a long way toward defeating the current pandemic. Professionally installed UV lights can kill all kinds of organisms in your ventilation. Ozone generators kill germs, too. But ozone damages organic things, including lungs. Businesses and other public spaces have a special problem because no filter can intercept the air exchanged between people who are breathing in each other’s faces.

Greeks

Smithsonian, May 18, 2021. “Contrary to Popular Lore, Ancient Greek Armies Relied on Foreign Mercenaries.” Contributed by Stephen Darnell. Homer’s Iliad and Herodotus’s Histories celebrate the many Greek city states coming together against a common enemy. But ancient Greek forces were not made entirely of locals. Scientists from University of Georgia say two thirds of the victims of the first Battle of Himera in 480 BCE were not from Greece. They came from Spain, the Black Sea

coast, and several other distant places. This is based on the strontium in the teeth of victims found in a mass grave in Sicily. So, although ancient Greeks considered foreigners to be barbarians, they were still willing to use them as mercenaries. But they didn’t write about it.

Cancel the Invasion.

Science, May 18, 2021. “Hardy Water Bears Survive Bullet Impacts—Up to a Point.” (Astrobiology) Tardigrades probably will not colonize the moon. Experiments done at Queen Mary University of London show that the hardy little critters can survive a lot of abuse, but they turn to mush in impacts over 900 metres per second and shock pressure greater than 1.14 gigapascals (GPa). To establish this, scientists loaded tardigrades into plastic bullets and fired them from a high speed gun into a sand target. The tardigrades that crashed on the moon in Israel’s Beresheet lunar lander were probably moving slower than that. But, they would have been mashed by the crumpling spacecraft.

Sandstorm

Michigan State University Center for Systems Integration and Sustainability. “Sand’s Urban Role Demands



Key Part on Sustainability Stage.” Earth is a silicon world. Luckily for us, silicon sand is useful for many different things from computer chips to windows and building aggregate. The supply of sand is vast, but so is the global need for building materials. Entire sandy islands have been consumed and a powerful criminal enterprise has risen due to the huge worldwide demand for sand. Alternatives, such as crushed rock, are being used to some extent in the U.S. and elsewhere. Recycling of construction waste is another possible alternative. But, better mining practices are needed to reduce the environmental impact on communities. Creative construction methods would help, as well.

Trinity

Smithsonian, May 21, 2021. “Study Plucks Rare Quasicrystal From Wreckage of First Atomic Bomb Test.” Contributed by Steven Darnell. The first atomic bomb test in 1945 produced a mineral that had never been seen before. It is called trini-

tite after the Trinity test site in New Mexico. The interesting thing about trinitite is that it is made of quasicrystals with six independent five-fold rotation axes while ordinary crystals can have two-, three-, four- or six-fold symmetry. This can occur because of the immense heat and pressure of the blast.

John Blinke

(continued from p6)

The Alphabet Code gives an Indo-European etymology for all twenty-seven letters of the Greek alphabet, adhering strictly to the laws of sound correspondences. The book is written in plain English, has over 860 references and over 50 illustrations, and is available at Amazon.com.

John V Day, PhD

(continued from p8)

proteins that protect antioxidants, blood vessels that do not appear to get stiffened with time and the lack of certain enzymes that researchers previously thought were essential to longevity. Armed with this information, scientists hope that some of it will be transferrable to humans to enable us to tweak our biological structure, which would result in longevity complemented with quality of life.

Sources: Max G. Levy, 'The Long, Strange Life of the World's Oldest Naked Mole Rat', *Wired*, 24 May 2021

J Graham Ruby, Megan Smith, and Rochelle Buffenstein, 'Naked Mole-Rat Mortality Rates Defy Gompertzian Laws by Not Increasing with Age', ed. Michael Rose, *ELife* 7 (24 January 2018)

Inham Hassen

Contributing to the Mensa World Journal

Please send your articles of general interest, your ideas, your poems and your letters to mwjeditor@mensa.org

Articles should be no more than 500 words, presented in MSWord, and be accompanied by hi-res graphics or photos.

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THERESE'S TEASERS

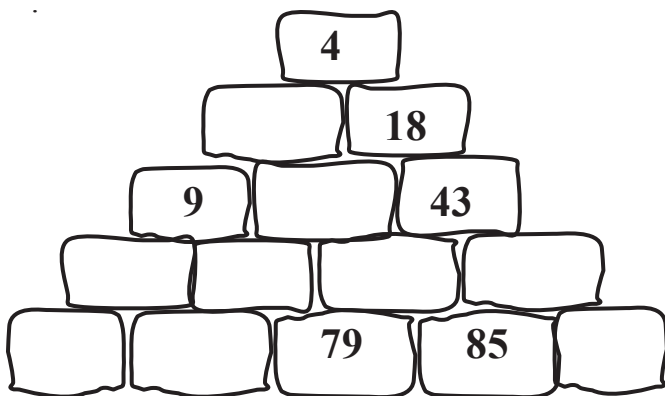
Cryptosum

Each symbol represents a different digit from 1 to 9. The sum of the digits in each row and column is shown. Find the sum of the numbers along the diagonal line from the top left-hand corner.

<i>er</i>	◆	♁	♃	22
□	☀	♋	◆	20
☀	□	⊗	👍	18
♃	♁	👍	☀	18
25	23	18	12	?

Cairn

The number on each stone represents the difference between the numbers in the two stones on which it sits. There is a two-digit number in each of the bottom stones, using the digits 0-9 once each.



Rebus

Which phrase is represented below?

Give give get get
Give give get get

Cryptic Clues:

The answers share a common theme. They can all be found in b).

- Part of a paragraph...
- ... to be spent in misplaced goals?
- Draw back to measure keeper.
- Rip snores out inmates
- Room in Mary's cello case
- Watchers for boys' entries limited
- Ursines – not English – at the window?
- Hidden captives will be fed this.
- Guardians lose Fleming as safety measure.

Anagram riddle

*6 letters have I, you can change them around
To find words which vary by more than a
sound:*

** To put within, or place inside;*

** Aussies speak this, if we're not tongue-tied;*

** Buries down deep, right down in the
ground;*

*Now that you've solved me, which words have
you found?*

Answers

Cryptosum: 25 (9 + 6 + 4 + 6) **Cairn:** 40 12 79 85 36
Rebus: Forgive and forget **Cryptic Clues:** a) Sentence
b) Gaols c) Warden d) Prisoners e) Cell f) Sentries g)
Bars h) Swill i) Guards **Anagram Riddle:** Insert, Strine,
Inters.

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