

## mensa world journal

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## CONTENTS

mensa international 02
- communication is key
- proposed constitutional
amendments explained
new research 05
- anxiety and IQ linked
mensa taiwan 06

metrology	07
before you know it	08
night owl	09
supplementally	10
- john blinke	
officer directory	11
therese's puzzles	12

## from the editor...



Hello, All,

By the time this issue arrives in your mailbox, the voting period for Mensa's Internationally-Elected Officers will have begun. Please do your bit to encourage and foster Mensa's presence around the world by putting your vote in. Your national office will give you the details of how to vote and the closing date.

On the ballot paper, along with the election for Officers, there will be five proposed Constitutional Amendments for you to vote on. An explanation of these Amendments is on pp3 and 4.

If you're an anxious type, there's a silver lining! On p5, we learn that new research shows that anxiety runs hand in hand with a high IQ. And have a look at Mensa Taiwan from a member's perspective on p8.

## Happy reading! Kate

#### Cover photo:

Mensa Taiwan Foundation Ceremony. Photo: Yuxio Tzeng

## from the Excomm

## 1. Communication is Key

We have some basic ways to communicate with our members wherever they may reside. Our magazines and newsletters, and perhaps even a Facebook group or two. More venues, it seems almost daily, have become available and how do we reach them all? How do we keep up and make sure our members and officers receive the information that they need?

To some, the answer is all of them. It would take a lot of volunteers to do that and we can't meet, match, or even find some of the possible social media sites. This is why we use our websites and magazines to provide updated information to our members.

Most members are less concerned with how Mensa is run than what Mensa provides to them. Their member experience is what is most important to them. Have they met new friends, attended exciting events, or feel they are a part of something where they feel they belong?

These are the important things that need to be communicated to our mem-

bers. This is also something that we can share between countries to provide a broader experience. The Mensa.org website has many events all around the world listed, if one only takes a look. I believe sharing some of that information in the individual country magazines and/or websites would help our members see that we are truly an international organization and enhance their experience.

Sharing and communicating what Mensa truly has to offer includes our events, not just our magazines and articles with clever themes. Members won't know what is available if we don't share. I've had members from different countries ask if they could attend gatherings in the United States and elsewhere or if the IBD meeting was open to members. We should communicate more widely that it is open and be welcoming to anyone that wishes to attend.

Share your events and use some of the events listed on the MIL website to promote the international flavor of our organization.

International Board of Directors' (IBD) meeting October 10 - 13, 2019 Kuala Lumpur, Malaysia

https://ibd2019.mensa.my

## 2. Constitutional Amendments Explained

Five proposed constitutional amendments appear on the current Mensa International ballot, along with the election of three international officers. As this does not happen on every ballot, a few words about the amendments and the process might be in order.

Each of the five proposed amendments was placed on the ballot by the IBD. An explanatory statement from the IBD appears with each proposed amendment. So does an argument in favor of the amendment and an argument against the amendment.

The amendments are voted on separately, not as a group. Each voter will have the choice of voting in favor, voting against, or not voting (leaving blank) on each amendment.

There are currently two ways for an amendment to pass: either 2/3 of the voters vote in favour of the amendment, or a simple majority of the voters (50 percent plus one) vote in favour of the amendment and a majority of the voters in at least one-third of the national Mensas vote in favour of it. As there are currently 46 national Mensas, and fractions are not allowed in this sort of computation, the one-third requirement translates to 16 national Mensas.

These are the five proposed amendments, along with shortened explanatory statements. Please see the election materials for the full explanatory statements and the statements in favour and against.

1. CONSTITUTIONAL AMEND-MENT – REPRESENTATION CAP FOR IBD

The following shall be put to a vote of the worldwide membership on the next regular election ballot:

In the Constitution of Mensa, Article V, section B.2 is revised to read:

"2. Notwithstanding the provisions of the preceding paragraph, no national Mensa shall have more than 40 percent of the full Board membership, nor shall any national Mensa exercise more than 40 percent of the full Board vote. If the result of the calculation of the 40 percent limit includes a fraction, the national Mensa involved shall have the next higher whole number of national representatives or of votes if the fraction is one-half or more, or the next lower whole number of national representatives or of votes if the fraction is less than one-half."

In the Constitution of Mensa, in Article IV, section D, a new subsection 4 is added as follows, renumbering other subsections accordingly:

"4. The "full Board membership" shall mean the maximum number of Board members if all officers and national representatives were present.

EXPLANATION: The 40 percent cap is already present in section V.B.2, but

the section refers only to voting on the Board (IBD); this amendment adds Board representation to it. No financial impact is expected from this amendment.

2. CONSTITUTIONAL AMEND-MENT -- PUTTING AN AMEND-MENT ON THE BALLOT

In the Constitution of Mensa, Article XIII, section B is revised to read:

"B. Any proposal for an amendment which is recommended by the Board, or by at least 1/3 of all national Mensa Committees, shall be submitted to a ballot among all members of Mensa."

EXPLANATION: The method being changed currently allows one or more national Mensa Committees representing at least 20 percent of the worldwide membership to put amendments on the ballot. This amendment changes that to 1/3 of the national Mensa Committees regardless of size. No financial impact is expected from this amendment.

### 3. CONSTITUTIONAL AMEND-MENT – HOW AMENDMENTS CAN BE PASSED

The following amendment to the Constitution is passed to a referendum of the worldwide membership on the next regular election ballot: Article XIII section A of the Constitution is amended by deleting the second alternative, so that article XIII section A reads: "This Constitution may be amended only as a result of a ballot

## from the Excom: Constitutional Amendments continued

among all individual members of Full and Provisional National Mensa and Direct International Members, provided that, of the members from whom completed ballots are received, more than one-half vote in favour of the amendment and the amendment is favoured by the voters in at least one-third of the national Mensas."

EXPLANATION: Currently, there are two ways for the membership to pass a constitutional amendment, one that considers the distribution of votes among national Mensas (with a total passage rate requirement of 50 percent plus 1) and one that does not (with a total passage rate requirement of 2/3). This amendment removes the way that does not consider the distribution of the votes among the national Mensas. There might be a small financial cost to this motion if it results in more processing by the independent vote-counting agency being needed.

### 4. CONSTITUTIONAL AMEND-MENT – TERMS OF OFFICE

The following shall be put to a vote of the worldwide membership on the next regular election ballot:

The Constitution of Mensa, Article X, section A.1, is revised to read: "1. The term of office of the named International Elected Officers is three years, from July 1 following their election until June 30 three years later. They shall be elected by a majority of the votes received during the election period, which shall be April 15 at the latest through May 31 of every third year commencing 2021 (2021, 2024, 2027 . . .)." The Constitution of Mensa, Article X, section B.1, is revised to read:

"1. The term of office of the named International Elected Officer is three years, from July 1 following his or her election until June 30 three years later. The officer shall be elected by a majority of the votes received during the election period, which shall be April 15 at the latest through May 31 of every third year commencing 2021 (2021, 2024, 2027...)."

**EXPLANATION:** This amendment changes the term of office for International Elected Officers (Chairman, Treasurer, and Directors of Administration, Development, and Smaller National Mensas) from two years to three years. It does not change the limit of a person being allowed to serve for a maximum of two consecutive terms in the same office. The financial impact of this amendment is a saving of 1/3of the expected total election expenses going forward, as there will be two elections every six years rather than three elections every six years. This saving is expected to be up to £5000 per year.

### 5. CONSTITUTIONAL AMEND-MENT – VOTING CAPS IN OFFICER ELECTIONS

The following amendment to the Constitution of Mensa is passed to a referendum of the worldwide membership on the next regular election ballot: In the Constitution of Mensa, Article X, section A.1 is revised to read:

"The named International Elected Officers may serve for a period of two years. They shall be elected by a majority of the votes received during the election period, which shall be April 15 at the latest through May 31 of the odd-numbered years, provided that no more than 40% of the votes in favour of a candidate come from any one national Mensa or, in the case of Direct International Members any one country, at any stage of the counting. The terms of office of the named International Elected Officers shall begin July 1 following their election."

If the constitutional amendment changing the officer term length from two years to three years passes, this amendment shall be adjusted accordingly to reflect three-year terms.

EXPLANATION: This amendment changes the method of electing international officers to take into consideration the distribution of the votes, in that it requires that no more than 40 percent of the votes in favour of a candidate at any stage of the counting be from a single national Mensa. This matches the 40 percent voting cap on national Mensas in the IBD. There might be a small financial cost to this motion if it results in more processing by the independent vote-counting agency being needed.

Log into the International website www.mensa.org for the calendar of national events

(Also, see p10 for current national events)

## new research says worry and anxiety are linked to high IQ

If you're like me, you think a little too much. Your thoughts and ideas swirl around so much in your mind that it can be hard to get much done, and it results in anxiety.

Relax. According to a new study, excessive worry isn't exactly a bad thing. In some cases, it could mean you have a high IQ. Not that that's something I can brag about for myself, but perhaps for you...

"It occurred to me that if you happen to have a preponderance of negativelyhued, self-generated thoughts, due to high levels of spontaneous activity in the parts of the medial prefrontal cortex that govern conscious perception of threat and you also have a tendency to switch to panic sooner than average people, due to possessing especially high reactivity in the basolateral nuclei of the amygdala, then that means you can experience intense negative emotions even when there's no threat present," said Dr. Adam Perkins, an expert in neurobiology of personality at Kings College in London.

"This could mean that for specific neural reasons, high scorers on neuroticism have a highly active imagination, which acts as a built-in threat generator," he added. "Cheerful, happy-go-lucky people by definition do not brood

about problems and so must be at a disadvantage when problem-solving compared to a more neurotic person," he continued.

"We have a useful sanity check for our theory because it is easy to observe that many geniuses seem to have a brooding, unhappy tendency that hints they are fairly high on the neuroticism spectrum.

"For example, think of the life stories of Isaac Newton, Charles Darwin, Vincent Van Gogh, Kurt Cobain, etc. Perhaps the link between creativity and neuroticism was summed up most succinctly of all by John Lennon when he said: 'Genius is pain.""

Dr. Jeremy Coplan, a researcher and professor of psychiatry at State University of New York Downstate Medical Center, weighs in as well.

"Although we tend to view anxiety as not being good for us, it is linked with intelligence - a highly adaptive trait," says Dr. Coplan. "High levels of anxiety can be disabling, and patients' worries are often irrational. Every so often there's a 'wild-card' danger, and then that excessive worry becomes highly adaptive." Coplan notes that, "People who act on the signals of that wild-card danger are likely to preserve their lives and the lives of their offspring."

So there you go. Your feelings of anxiety may actually be the key to the survival of humanity. Not to, you know, stress you out or anything...

Reprinted from Mensa Magazine, January 2019, Editor Brian Page.

#### **UK Mensa Event**

Mensa at Cambridge 40th Anniversary Queens' College September 5 - 8, 2019

Theme: Gifted Adults: Brilliant Innovation and Extraordinary Contributions

www.mensa.org.uk/events/mensacambridge-2019



# Mensa, a growing influence in Taiwan

- a member's view

#### Why and how did you join Mensa?

I took the IQ test in Taipei and joined Mensa Taiwan in March, 2017. Just a few months before that, I had heard about Mensa for the first time from my colleague, Rebecca, who was one the earliest members of Mensa Taiwan.

#### What do you think of Mensa?

"Friendship, sharing & acceptance" Because of friendship and sharing, Mensa is a platform that breaks the limitations of interests, expands our vision, and stimulates ideas. In addition, thanks to its tolerance and acceptance, Taiwanese members benefit a lot from this platform by joining voices outside the mainstream opinions.

#### What do you do in Mensa Taiwan?

Just like Mensa activities around the world, there are monthly meetings, the Taiwanese e-magazine and various Special Interests Groups (SIGs), such as food lovers (food is a common language for Taiwanese), board games players, travellers, and so on.

I participated in some events last year, including real escape games which are growing as popular as board games now - wine tasting, and Christmas gift exchange events.

## How about the Mensa Taiwan Annual Gathering (MTAG)?

We hold the annual gathering at the end of each year and welcome friends from all countries to join. Besides communication activities, we have an ideasharing section with several talks, one of which was voted the most interesting topic beforehand, and which drew a lot of attention. Another exciting part of our MTAG in 2018 was the official founding conference in which Mensa Taiwan was recognized as a formal organization (see photograph below).

### How strong is the international connection?





Avery, Yu-Wen Hung Mensa Taiwan member Consultant & Epidemiologist

Due to geographical and historical relationship, members of Taiwan, Japan and mainland China have been in close communication. In addition, international events, such as the SIGHT program and AMG, are excellent channels to exchange ideas. I joined the Asia Mensa Gathering last year in Cebu, Philippines, and now have many precious memories. Now, many Taiwan members are looking forward to seeing

> friends at the AMG in New Zealand, and IBD in Kuala Lumpur 2019.

I believe every Mensa member from different countries will make Taiwanese friends very soon!

Avery, Yu-Wen Hung

Note: Mensa Taiwan is the informal name of the national Mensa known officially as Mensa Taiwan (Chinese Taipei). KN

mensa world journal may 2019

## wave function for the spin of the early universe

- Juan C Echaurren summarises his article published in the International Journal of Astronomy and Astrophysics in May, 2017



Juan C. Echaurren

In 1969 the theoretical physicist Stephen Hawking published a very interesting article, entitled "On the Rotation of the Universe"; the conclusions of this work proved to be very useful for my future research in this field. The development of quantum mechanics and its application to astrophysics have been fundamental in generating the necessary work tools, such as Quantum Cosmology, that together with the General Relativity of Einstein, facilitate the finding of a wave function for the spin of the universe. From the above, the spin of the universe is revealed as follows:

An infinitesimal time after the Big Bang, an incandescent sphere with high degrees of indistinguishability, is projected into the newly created microscopic space. Geometrically in this stage, two phenomena can occur: a low ratio between both surface area and volume; or a very high ratio between both surface area and volume. In the first case, our infinitesimal sphere of energy that represents our primitive universe, will gain a spin movement on its own axis, which will tend to decrease during inflation and the rest of the expansion. In the second case, the primitive universe with a surface area greater than its volume, will acquire, in addition to a spin, an orbital movement around a virtual center. In physics, spin and orbital movements are called both intrinsic angular momentum and orbital angular momentum, respectively. Our universe as we know it is better represented by the second case, both in its initial moments and in its final destination through expansion.

The mathematical treatment used was initially to find the solution to the Wheeler-DeWitt equation for the wave function of the universe, which turned out to be a polynomial series of infinite elements, each of them being a state of the universe during the expansion. The next step is, in quantum formalism, to apply a rotation to this wave function of the universe, to obtain its intrinsic angular momentum, i.e., its spin wave function. If we apply the spin values obtained by Hawking to this wave function, and we deduce the density of energy and mass in the vacuum, we will obtain values large enough to indirectly demonstrate the presence of both dark energy and dark matter in the universe. We can also apply this wave function to estimate the age of our universe, from

spin values after the Big Bang until current estimates.

To finish, it is necessary to add that in the current state of the universe, both the orbital angular momentum and the intrinsic angular momentum are still present, but due to the dimensions of the expansion in the present, both are very diminished, the orbital component of the universe being the least diminished.

#### Juan C. Echaurren

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Juan Carlos Echaurren, lives in the city of Calama, Chile. He is married with one daughter and first heard of Mensa thirty years from TV. He says he "joined Mensa out of curiosity."

Juan works in a thermometry laboratory as a metrologist<sup>\*</sup>, and conducts research into impact craters and mathematical modelling.

\*Metrology is defined by the International Bureau of Weights and Measures (BIPM) as "the science of measurement, embracing both experimental and theoretical determinations at any level of uncertainty in any field of science and technology". KN

## before you know it...

In a study published recently in the journal *Scientific Reports*, researchers in Australia were able to predict basic choices participants made 11 seconds before they consciously declared their decisions.

In the study, participants - each placed in an fMRI machine - were shown two patterns, one of red horizontal stripes and one of green vertical stripes. They were given a maximum of 20 seconds to choose between them. Once they'd made a decision, they pressed a button and had 10 seconds to visualize the pattern as hard as they could. Finally, they were asked "what did you imagine?" and "how vivid was it?" They answered these questions by pressing buttons. Using the fMRI to monitor brain activity and machine learning to analyze the neuroimages, the researchers were able to predict which pattern participants would choose up to 11 seconds before they consciously made the decision. And they were able to predict how vividly the participants would be able to envisage it.

Lead author Joel Pearson, cognitive neuroscience professor at the University of South Wales in Australia, said that the study suggests traces of thoughts exist unconsciously before they become conscious. "We believe that when we are faced with the choice between two or more options of what to think about, non-conscious traces of the thoughts are there already, a bit like unconscious hallucinations," he said in a statement. "As the decision of what to think about is made, executive areas of the brain choose the thoughttrace which is stronger. In, other words, if any pre-existing brain activity



matches one of your choices, then your brain will be more likely to pick that option as it gets boosted by the preexisting brain activity."

The work has implications for how we understand uncomfortable thoughts: Pearson believes the findings explain why thinking about something only leads to more thoughts on the subject, as it creates "a positive feedback loop." The study also suggests that unwelcome visualizations, such as those experienced with post-traumatic stress disorder, begin as unconscious thoughts. Though this is just one study, it's not the first to show that thoughts can be predicted before they are conscious. As the researchers note, similar techniques have been able to predict motor decisions between seven and 10 seconds before they're conscious, and abstract decisions up to four seconds before they're conscious. Taken together, these studies show how understanding how the brain complicates our conception of free will.

Neuroscientists have long known that the brain prepares to act before you're consciously aware, and there are just a few milliseconds between when a thought is conscious and when you enact it. Those milliseconds give us a chance to consciously reject unconscious impulses, seeming to form a foundation of free will.

Freedom, however, can be enacted by both the unconscious and conscious self - and there are neuroscientists who claim that being controlled by our own unconscious brain is hardly an affront to free will. Studies showing that neuroscientists can predict our actions long before we're aware of them don't necessarily negate the concept of free will, but they certainly complicate our conception of our own minds.

Extracted from QUARTZ news March 09, 2019

## Night Owl v Morning Lark...

'Night owls' - those who go to bed and get up later - have fundamental differences in their brain function compared to 'morning larks', which mean they could be disadvantaged by the constraints of a normal working day.

Research led by the University of Birmingham found that individuals whose internal body clock dictates that they go to bed and wake up very late (with an average bedtime of 2:30am and wakeup time of 10:15am) have lower resting brain connectivity in many of the brain regions that are linked to the maintenance of consciousness.

Importantly, this lower brain connectivity was associated with poorer attention, slower reactions and increased sleepiness throughout the hours of a typical working day.

According to the Office for National Statistics, around 12 per cent of employees work night shifts. We already know that there are huge negative health consequences for night shift workers due to the constant disruption to sleep and body clocks.

However, disruption can also be caused by being forced to fit into a societal 9-5 working day if those timings do not align with your natural biological rhythms. Since around 40-50 per cent of the population identify as having a preference for later bed times and for getting up after 8.20am the researchers say much more needs to be done to explore negative implications for this group.

The lead researcher, Dr Elise Facer-Childs, of the University of Birmingham's Centre for Human Brain Health, says: "A huge number of people struggle to deliver their best performance during work or school hours they are not naturally suited to. There is a critical need to increase our understanding of these issues in order to minimise health risks in society, as well as maximise productivity."

The study, published in the journal SLEEP, investigated brain function at rest and linked it to the cognitive abilities of 38 individuals who were identified as either 'night owls' or 'morning larks' using physiological rhythms (melatonin and cortisol), continuous sleep/wake monitoring and questionnaires. The volunteers underwent MRI scans, followed by a series of tasks, with testing sessions being undertaken at a range of different times during the day from 8am to 8pm. They were also asked to report on their levels of sleepiness.

Volunteers identified as morning larks reported to be least sleepy and had their fastest reaction time during the early morning tests, which was significantly better than night owls. Night owls, however, were least sleepy and had their fastest reaction time at 8pm in the evening, although this was not significantly better than the larks, highlighting that night owls are most disadvantaged in the morning. Interestingly, the brain connectivity in the regions that could predict better performance and lower sleepiness was significantly higher in larks at all time points, suggesting that the resting state brain connectivity of night owls is impaired throughout the whole day (8am-8pm).

Dr Facer-Childs, who is now based at the Monash Institute for Cognitive and Clinical Neurosciences in Melbourne, Australia, says: "This mismatch between a person's biological time and social time - which most of us have experienced in the form of jet lag - is a common issue for night owls trying to follow a normal working day. Our study is the first to show a potential intrinsic neuronal mechanism behind why 'night owls' may face cognitive disadvantages when being forced to fit into these constraints.

"To manage this, we need to get better at taking an individual's personal body clock into account - particularly in the world of work. A typical day might last from 9am-5pm, but for a night owl, this could result in diminished performance during the morning, lower brain connectivity in regions linked to consciousness and increased daytime sleepiness. If, as a society, we could be more flexible about how we manage time we could go a long way towards maximising productivity and minimising health risks."

University of Birmingham. "Brain connections that disadvantage night owls revealed." Science-Daily. ScienceDaily, 14 February 2019. <www. sciencedaily.com/releases/2019/02/190214191937. htm>.

## what's on...



MENSA CANADA AG (MONTREAL) | 31 MAY - O2 JUNE

MENSA MALAYSIA AGM | 31 MAY

MENSA SWEDEN AGM (UPPSALA) | 01 JUNE

MENSA AUSTRIA AG (VORARLBERG) | 06 - 10 JUNE

MENSA DENMARK AG (ARHUS) | 07 - 10 JUNE

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MENSA POLAND AG | 20 - 23 JUNE

AMERICAN MENSA AG PHOENIX, ARIZONA | 03 - 07 JULY

# supplementally...

### by john blinke

#### Corps of Discovery.

I had an unexpected conversation lately. I was carrying on about the wonderful discoveries at Pluto, and the other guy said "So, what?" Well, I hardly ever hear anyone say that. But it made me think. What is the value of space exploration?

Space exploration is like the Lewis and Clark expedition to explore the American West in 1804. Their group of explorers was called the Corps of Discovery. President Jefferson sent them to find out what was valuable out there. What was dangerous? What were the inhabitants like? Nobody could know until somebody looked. And then the information could be shared as needed.

Apart from exploration, information about the natural world is never wasted. Michael Faraday didn't know that his experiments would lead to electric motors. Rutherford didn't know his research would lead to nuclear power. These guys, and many others, were just advancing human knowledge any way they could. There were things about nature they didn't know, and they labored to make them understood. That understanding eventually led to amazing advances in knowledge and incredible consumer products.

So, Pluto has a giant glacier made of frozen nitrogen at essentially zero atmospheric pressure. Who could guess such things were possible? We don't know what future generations will do with that knowledge. But we will add it to the sum of human knowledge for everyone to see.

You could even find value in a purely mercenary sense. NASA spinoff technology has made many tech industries possible. Things developed for one task are frequently spun-off for others. You would not have GPS or cellular phones or wireless ICU monitoring without our space program. Find out more at: NASA Spinoff youtube channel: https:// www.youtube.com/user/NASASpinoff

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#### Oops

Science News, December 10, 2018. "A Satellite Screw-Up Reaffirms Einstein's Theory of Gravity." https://tinyurl.com/ suppmensa

Global positioning satellites have loads of interesting gadgetry on board. One of these is a very accurate atomic clock. This was handy when two of Europe's Galileo GPS satellites accidentally ended up in elliptical orbits. The egg shaped orbits made them useless for global positioning. But they made them ideal for testing Einstein's theories. According to Einstein, time moves more slowly in a stronger gravitational field. So the clocks on the satellites should tick at a different pace when close to the Earth. ... They do.

#### New Home for Sue

fieldmuseum.org. "Step Into Sue's World." https://www.fieldmuseum.org/ blog/fresh-science-makeover-sue

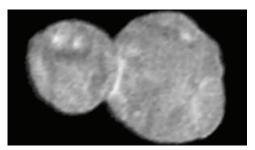
Sue the T-rex has been the star attraction of Chicago's Field Museum for almost two decades. But she looks different lately. She lives in a brand new exhibit showing other critters that lived The most noticeable change is an extra set of floating ribs in the middle of her belly. These "gastralia" could have been anchors for stomach muscles. They would have made her underside pretty hard compared with ours. Did they also give her a more authoritative roar? They do show that Sue was even heavier than

scientists had thought — up to ten tons instead of eight.

### The Face of Thule

Science News, January 29, 2019. "The Latest Picture of Ultima Thule Reveals a Remarkably Smooth Face." https://bit. ly/2TkjIHh

The best view of Ultima Thule (MU69) looks like a pair of half-melted snowballs. There are a very few small sharp edged craters, but the object



does not resemble Earth's pockmarked moon at all. It is clear that the Kuiper Belt is not the kind of shooting gallery the inner planets inhabit. Scientists at the Southwest Research Institute think MU69's smooth complexion is evidence that protoplanets formed out of the presolar nebula, not through some demolition derby process. There isn't much debris around to form craters.

Johnb44221@cs.com



67 million years ago. And she looks fatter. This is because of better information about how her skeleton fits together.

## OFFICER DIRECTORY

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## BRAIN TEASERS

